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ABSTRACT

A study was conducted to determine how a representative sample of Iowa elementary school teachers viewed a number of research-supported and nonsupported teaching procedures in spelling. In addition, the study was designed to ascertain the degree to which this representative sample of teachers was utilizing or not utilizing selected research-supported procedures in teaching spelling to their pupils. The data were obtained through mailed attitudinal questionnaires completed in the spring of 1970. From the 1,472 questionnaires mailed, 1,289 (88%) were completed and returned. Some of the results were that more than 40% of the teachers disagreed with the proven practice of presenting spelling words initially in list form, more than 90% agreed with proven practice that spelling words of highest frequency in writing should be studied, more than 42% disagreed with the proven practice of having children correct their own spelling tests, and more than 79% disagreed with the research proving that it is unnecessary to learn the meaning of the words. (The appendixes include the survey instruments and summaries of research-supported and nonsupported practices.) (MKM)

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SPELLING: LEARNING AND INSTRUCTION

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PREFACE

Within the past three decades there have been two major changes that have enjoyed considerable impact on public school education. First, during the late 1940's and throughout the 1950's a national effort was directed toward reorganization and consolidation of American public schools. This movement had almost immediate effect upon the improvement of public education in America. Second, the passage of national legislation in the form of the Elementary and Secondary Education Act led to immediate development of literally thousands of techniques, approaches, and procedures for educating youth. As a result teachers have been engulfed in a materials landslide.

In the process of relating to an abundance, and possibly overabundance, of educational materials the present day educator runs the risk of neglecting the very foundation of excellent education--the scientific basis supporting practice.

It's with this view in mind that we set about to determine how Iowa elementary educators viewed a selected number of spelling practices. It was felt that if the prevailing mood could first be established, then a later, more concerted, effort could be made to effect instructional improvement.

Our approach was to first select from the research and literature both positive and negative practices. Then to place these practices before a random sampling of Iowa elementary teachers for their reactions. Third, to analyze the data and bring forth definite recommendations for spelling improvement. We hope we have accomplished our objectives. The improved spelling ability of youth will validate our claims.

We have attempted to draw attention to the fact that spelling improvement can be attained by:

1. Utilization of a research based spelling program;
2. Understanding of where teachers are most likely to error in their beliefs or practices;
3. Increased use of research supported practices;
4. Elimination of practices not supported by research.

This study developed when we became convinced that despite the great number of research studies conducted in spelling, over the past decades, that little of it was being incorporated into spelling programs. Publishers have evidenced tremendous variability in their spelling series. Teachers have reflected the variability of the series in their teaching procedures. It appears that confusion is thus the remaining condition.

We have attempted to replace the present day "eclectic" approach with one that is systematic and research based. We sincerely hope that our approach which (1) surveyed the research, (2) surveyed the Iowa elementary teachers, and (3) posited specific recommendations was lucid enough to provide schools, publishers, and authors with concrete suggestions for improvement.

What we have learned from this study is that education is too valuable, important, and systematic to be left to chance. We have been impressed with the past efforts of many teachers and researchers. We are equally impressed with the fact that if spelling instruction is to improve in schools it will be the direct results of efforts by authors, publishers, researchers, teachers, and pupils.

Our trust lies in those who provide sound leadership to future generations. This includes all educators, parents, pupils, and publishing houses. Through concerted and combined efforts, the instructional program can be even better.

For the reader's convenience the report is organized in the following manner:

1. Introduction to the problem (Chapter One).
2. Review of pertinent research and literature (Chapter Two).
3. Analysis of data, conclusions, and recommendations (Chapter Three).
4. An Appendix with the following elements:
   a. Instrument
   b. Identification of research and non-research supported beliefs and practices.
   c. A brief abstract of the study's findings.
   d. A capsule summary of the research and non-research supported statements.
   e. A comparative analysis in tabular form.

The following may be a helpful format to follow in reading the monograph:

1. Read Chapter One - Introduction.
2. Read Appendix B - Abstract.
3. Read Appendix C - Overview of Research.
4. Read Appendix A - The Instrument.
5. Read Chapters Two and Three - Review of Past Research and Present Study Recommendations and Data.

We are grateful to Iowa elementary educators and University of Iowa graduate students who helped us immeasurably in focusing upon the issues. We thank them for their cooperation. We are also grateful for the support we have received from our respective institutions of higher learning. Efforts of this type could not be consumated without their support.

Special thanks are extended to Margaret Loomer for willingness to donate her time and energy to putting the monograph in final form.

Robert J. Fitzsimmons
Assistant Professor
Central Connecticut State College
New Britain, Connecticut

Bradley M. Loomer
Professor
University of Iowa
Iowa City, Iowa

CHAPTER I

INTRODUCTION

Historically, spelling has been one of the most frequently investigated areas of the curriculum. However, improvement in spelling programs in the elementary schools does not seem commensurate with research efforts. Petty (1969) has stated "that much has been learned but the knowledge has not been used. The problem in spelling really is the application of what is known (p. 79)." For example, the results of the findings of E. Horn (1926), Fitzgerald (1951), T. Horn & Otto (1954) indicate that a basic writing vocabulary of approximately 2,800 to 3,500 well-selected words, high useful both in child and adult writing, is a desirable spelling goal for the elementary school child. To require a child to master a much larger basic writing vocabulary in the elementary school is out of harmony with research. E. Horn (1924) stated "that the thousand most used words comprise, with their repetitions, about 90 per cent of the total of child and adult writing (p.87)."

A second area in which a great deal of research has been done in is methods of learning to spell a word. In the investigations done by Fitzgerald (1951), the following techniques for learning to spell a word have been found valuable: (1) Look at the word carefully; (2) Say the word; (3) With eyes closed, see the word; (4) Cover the word and then write it; (5) Check the spelling. If the word is misspelled, start again with Step Number 1.

There is also a wealth of research findings indicating that the test-study method of teaching spelling is more effective than the study-test method. Gates' (1931) study has shown that the test-study method of teaching spelling, when properly used, is superior to the study-test method. T. Horn's (1947) study as well as subsequent studies done by Hibler (1957) and Montgomery (1957) clearly show that use of the test-study method is superior to the study-test method.

A fourth area which has been researched extensively is the concept of time allotment. Fox & Eaton (1946) and T. Horn (1947) in their studies showed that schools with large time allotments in spelling secured the same or no better results than schools with more moderate allotments. The date from more recent investigations support these conclusions. T. Horn (1969) states that "it appears likely that the time alloted for direct study of spelling in excess of 60 minutes a week may be spent more advantageously in other areas (p. 1286)."

> Fitzgerald (1951) states:
> . . . although many spelling investigations have been carried out during the past half century, improvement in the working of spelling has been slow. One of the chief difficulties seems to have been that the results of research and experimentation were not readily available to the teacher. Although additional investigations are necessary to solve some of the more complex problems of spelling, many of the immediate spelling problems can be solved by the use of available research findings . . . (pp. 2-3).

Christine & Hollingsworth (1966) also make note of the large number of studies done in the area of spelling. They concluded that, "Many studies concerning spelling instruction have been made in the twentieth century, yet many pupils have learned to spell incorrectly (p.565)."

Leading authorities such as T. Horn, Fitzgerald, and Hanna are of the opinion that there is available professional knowledge based on research that would go far toward preventing and solving spelling problems. This opinion is reflected by E. Horn in his statement on spelling in the 1960 edition of The Encyclopedia of Educational Research which concludes with ". . . the chief problem today appears to be a more critical and universal application of the evidence now available (p. 1350)." Campanale (1962) also concurs with E. Horn when he states that, "If instruction in spelling were planned in a more definite fashion, utilizing pertinent research findings, it could be made more meaningful (p. 446)."

Ernest Horn (1944) declared that the problem in spelling was to implement what research had been done, not to do more research. Much has been learned, but the knowledge has not been used effectively. More specifically he stated that,

> The evidence is sufficiently complete and convincing to enable schools to teach spelling with substantial professional efficiency. Shortcomings in the teaching of spelling are therefore due not so much to the absence of satisfactory evidence as to the lack of knowledge of existing evidence, to the failure to apply it intelligently, or to erroneous interpretations (p. 6).

As regards the teaching of spelling, one is concerned with what the elementary teacher actually knows about the specific procedures and useful techniques available in the teaching of spelling. In general terms, is the elementary teacher knowledgeable about research-supported procedures in the teaching of spelling? Does the teacher, in fact, utilize research-supported techniques in conducting the spelling program in his classroom?

Information known ten, fifteen, twenty years ago is still known today. But is the knowledge applied any more universally today than previously? It was the purpose of this study to find the degree to which a representative sample of Iowa elementary teachers were aware of research and non-research supported procedures in spelling and to what degree those procedures were utilized in classrooms.

CHAPTER II

REVIEW OF THE RELATED RESEARCH AND LITERATURE

Introduction

This chapter contains a review of the literature which has relevance to the improvement of spelling ability in schools.

The related research and literature was separated into the following nine subsections: Word Lists, Marking Hard Spots, The Corrected-Test Method, Time Allotment, Test-Study-Test Method, Presenting Words in List Form, Presenting Words by Syllables, Spelling Rules, and Other Pertinent Observations.

Word Lists

Many investigations of children's vocabularies have been undertaken in the interest of determining what words should be taught to spell. These investigations have been directed toward the field of writing vocabularies.

Some of the more important and better known studies are those of Jones, Tidyman, Bauer, Fitzgerald, McKee, and Rinsland. In addition, E. Horn's Basic Writing Vocabulary was a composite of many important studies as well as his own investigations in selecting the 10,000 words most commonly used in writing.

Brief reference is made to each of the prior mentioned studies.

1. One of the earliest investigations concerned with the statement of lists of words suitable for spelling in the intermediate grades was that of F.W. Jones (1913). A study was made of the vocabularies of 1,050 students in grades two to eight inclusive in four states. The purpose of the investigation was to determine what words, grade by grade, children use in their own free written speech, and what words, therefore, they need to know how to spell.

   Teachers were asked to have students write themes under regular school conditions on any topics of interest to them. Students did not know that the themes were to be used in any other way than for regular school work. Themes were examined from each student until his work ceased to show the addition of new words.

   The number of running words examined was approximately 15,000,000 which yielded 4,532 words used by two or more per cent of the pupils. Words were graded to the lowest grade in which at least two per cent of the students used them.

   This study directed attention to the fact that the vocabulary of children should be studied and that there was much difference between running words and different words.

2. The purpose of W.F. Tidyman's (1921) "Survey of the Writing Vocabularies of Public School Children in Connecticut" was to supplement previous investigations in the following ways:

   (1) to determine the second and third thousand words commonly used by children in their spontaneous compositions, (2) to determine the grade in which all common words are used, and (3) to develop an accurate and expeditious method of examining words in large numbers (p. 2).

   Approximately 5,000 themes were collected from all parts of the state of Connecticut representing work of pupils in grades three to nine inclusive in 27 schools. A total of 3,850 different words were found in the 538,500 running words used. Words consisting of one or two syllables were not counted and certain other words were omitted in the various grades.

3. The Bauer (1916) investigation entitled "The New Orleans Public School Spelling List" was for the purpose of preparing a list of words to be used as spelling material in the grades by determining the writing vocabularies of pupils.

Approximately 18,000 themes were secured from students in grades three to eight inclusive. Pupils were required to write on one or more of 90 assigned topics related to child life and activities. Words were arranged alphabetically and according to frequency. The number of misspellings of each word was also recorded.

It was found that 19,000 different words had been used--a total frequency of 2,500,000. Of this number the 3,037 words which had a frequency of 40 or more were assigned to the various grades. The words assigned to each grade were those having the greatest frequency in the succeeding grade. An additional 1,336 words were apportioned to the various grades from the plural and possessive forms of certain nouns, comparative and superlative forms of certain adjectives, participal forms of certain verbs, and the adverbs formed from certain adjectives.

4. James A. Fitzgerald (1931) collected 3,784 letters, written outside school, of fourth, fifth, and sixth grade school children from school systems in many states and some foreign countries. In 461,321 running words, he secured 7,340 different words. Of 2,106 words occurring eight times or more, 2,000 were used in letters of all three grades. The 2,106 words and their repetitions made up about 97 per cent of the running words.

5. In the McKee (1939) study 2,329 different words were found in 18,958 running words in a study of 180 themes written by sixth grade children.

6. The studies conducted by Henry D. Rinsland (1945) on the vocabulary of children in grades one, two, three, and six, both inside and outside of school, show many discrepancies between words used by these children and established lists. For the 6,000,000 running words, the publication plans involve a list of 15,000 different words with columns for frequencies of each of the eight grades.

Green (1955) wanted to develop an up-to-date list of words that would give practical assistance to the elementary school teacher in teaching spelling.

The scale developed presented the spelling accuracy of a scientifically selected list of 5,507 words of high social usefulness. The words were selected from several lists. The preliminary selection was made from an unpublished compilation in the possession of Ernest Horn, which contained all the words of the first 5,000 in frequency as indicated by his A Basic Writing Vocabulary, all the words in the first 3,000 in product, which was determined by multiplying the eighth grade difficulty as shown in Ashbaugh's Iowa Spelling Scales by the frequency in elementary school children's writings, as shown by several previous studies, including those of Fitzgerald, McKee and Rinsland, all the words in the first 3,000 of the Thorndike-Lorge Teacher's Word Book of 30,000 Words, and the most-used words in the spoken vocabulary of young children.

Each word in the vocabulary list appeared in the highest 4,000 words in frequency in E. Horn's A Basic Writing Vocabulary, or in the highest 4,000 words in the Thorndike-Lorge Teacher's Word Book, or in the Rinsland's A Basic Vocabulary of Elementary School Children.

The sampling of pupils to determine the level of difficulty was done with some 230,000 pupils in 645 school systems distributed in every state in the United States and the District of Columbia. Each pupil spelled 100 words, making a total of over 23,000,000 spellings. The schools were selected at random within

seven different population classifications. Administrators of the schools were asked to select those classrooms where assurance could be had that the study would be carried out as directed. The teachers did the scoring of their own papers and sent in the results on a prepared form. These were then translated onto IBM cards and the list prepared. The list was intended to be used for spelling book evaluation, the selection of words for spelling tests, and as a source for remedial and diagnostic material.

The question is sometimes raised about the reliability of a vocabulary sample taken at a particular time as compared with vocabulary samples of other kinds and/or writing samples taken 30 or more years before or after the compilation.

A comparison was made between A Basic Writing Vocabulary and a tabulation of 100,000 running words from the letters of Benjamin Franklin. It was found that 97 per cent of the words Franklin used ten or more times and 95 per cent of the words used five to nine times appear in a A Basic Writing Vocabulary. Thorndike's (1921) comparison of The Teacher's Word Book showed that all but 170 of the 5,000 words of highest frequency in E. Horn's (1926) study occurred in the same form or in a base form from which the words could be built by adding suffixes, but were not reported separately by Thorndike.

Another comparison study was done by Hollingsworth (1965). His research was conducted in order to:

1. Compare vocabular words in letters to the editor on March 18, 1962 in four metropolitan newspapers to E. Horn's list of 10,000 Words Most Commonly Used in Writing is still useful as a basis for present spelling lists.

Letters to the editor were used for this study from four widely separated newspapers that cover the United States. The four metropolitan newpapers selected were: The New York Times, Chicago Sunday Tribune, The Denver Post, and Los Angeles Evening and Sunday Herald Examiner. These four newspapers were selected because of their geographical locations throughout the continental limits of the United States. In this way no local or sectional area would influence the compilation of adult vocabulary words. Letters to the editor were selected as being typical of adult writing. From the content of most of the letters, the letters seemed to be written by people from all levels of writing ability.

E. Horn's (1926) criteria used in selecting his vocabulary list were used for this study. All words were tabulated from the letters to the editor with the exception of:

1. All proper names of persons and places, names of months and days.

2. All words of less than four letters, since these have relatively small spelling difficulty.

3. The following common words:

about	have	shall	they	were	good	
after	here	should	thing	what	over	
been	just	some	this	when	these	
before	know	that	time	which	well	
come	letter	their	under	will	your	
could	much	them	until	with	yours	(p.21)
from	must	there	very	would		

A total of 4,960 running words were printed in the letters to the editor on March 18, 1962 in the four metropolitan newspapers. The New York Times, "Letters to the Times," had 1,385 running words. The Chicago Sunday Tribune, "Voice of the People", had 1,305 running words. The Denver Post, "The Open Forum," had 1,809 running words. And the Los Angeles Evening and Sunday Herald Examiner, "Letters to the Editor," had 461 running words.

Of these 4,960 words, 1,992 words were tabulated according to E. Horn's criteria mentioned above. A total of 1,245 different word forms were compiled from the 1,992 words tabulated.

The second objective of this study was to determine if E. Horn's list of 10,000 Words Most Commonly Used in Writing was still useful as a basis for present spelling lists.

Although Hollingsworth used a small sampling for comparison, the results agreed with the known research. E. Horn's study showed a very small amount of loss or gain in word usage, and this study paralleled his findings.

In attempting to run down the age of his 5,000 words of greatest frequency in the 10,000 Words Most Commonly Used in Writing, E. Horn (1939) stated:

> Less than 4 per cent of these words have come into the language since 1849, and less than 10 per cent have come in since 1749. More of these words were in the language before 1099 than have come into the language since 1799 (p. 134).

Words that may have a high adult frequency today are:

barriers	disarmament	nuclear	wildlife
billion	freeway	phony	tourists

These above eight words had a high degree of frequency in the letters to the editor. These words could be added to a word list today because conditions exist today that are different from conditions of 1926. Very few words have come into our writing vocabulary since 1926 as evidenced by this study.

Although there were 153 words not found in E. Horn's list from this study, only sixteen words were used frequently. Of these words, eight have a high adult word frequency today because of the existing conditions in our society. The findings indicated the value of E. Horn's 1926 list of 10,000 Words Most Commonly Used in Writing in that it was of valid use in constructing spelling lists today.

E. Horn (1960) stated that, "Since the words taught in the first six grades are those most often used by children in writing, most of these words are familiar to the children. The arbitrary practice of teaching the meaning of each word is therefore a wasteful practice (p. 1346)." T. Horn (1969b) concurred with the aforementioned.

When selecting words for a spelling curriculum or evaluating those in a course of study or a textbook, the criteria presented by E. Horn (1960) were most useful. Each word should be considered in view of the following:

1. Frequency of use: How frequently is the word used in writing? Is it used often enough to include it in the basic spelling list?

2. Difficulty: How difficult is the word at various grade levels?

3. Geographic distribution: Is the word used universally throughout the United States?

4. Permanency: Is the word a permanent word in the language? E. Horn (1960) has reported data on the age of the most common words. A permanent word such as refrigerator is preferable to a trade name such as frigidaire.

5. Spread: Is the word used in various kinds of writing? Despite the trend toward the acceptance of colloquial language, the use of quality words and purity in expression should be encouraged.

6. Cruciality: Is it a word, the misspelling of which would penalize the writer?

E. Horn called attention to the fact that little was to be gained by teaching a large number of words. Each child should learn to spell the words he needs in writing. Some children will need many words and others only a few as they mature and live out their lives in various occupations.

It would be wasteful of time and energy to teach 4,000 words to a child who will use only 2,000. It would be equally unwise to teach a child to spell 10,000 words only because he has the ability to learn to spell them.

The data on diminishing returns indicated that a comparatively small core of words and their repetitions made up a large percentage of the running words used by child and adult. In a substantial sampling of child letterwriting, the most common 100 words with their repetitions comprised more than 60 per cent of the words written; the 2,106 most common accounted for an average of approximately 60 per cent of the total writing, and the most common 2,000 accounted for 90 to 98 per cent of the total number of running words used by children in the elementary grades.

According to E. Horn (1924) the most common 1,000 words and their repetitions comprised 90 per cent of running writing, the most common 2,000 accounted for 95.3 per cent, the most common 3,000 accounted for 97.6 per cent, the most common 4,000 accounted for 98.7 per cent, and the most common 5,000 and their repetitions comprised 99.2 per cent of the total running words of his sampling. According to his data, the most important 1,000 words will be used on the average of nine times as often as all other words. The ability to spell, in everyday writing, a core of approximately 2,800 to 3,000 well-selected, useful words by the end of the sixth grade would seem to be a generally desirable spelling goal for the elementary school child.

T. Horn (1969b) said:

> . . . those who contend that a locally devised list of words (if based on counts approaching those of Fitzgerald, E. Horn, and Rinsland) will deviate significantly from the high-frequency words already identified are in for disillusionment; evidence has already shown that the high-frequency vocabulary in children's and in adult writing is very similar. Over and above the security segment of the spelling curriculum, pupils should be free to pursue their own special interests and needs and should be encouraged to do so. Nevertheless, local school districts can better employ staff time in other ways than in attempting to develop a local list of spelling words to be learned (p. 1288).

In the same year he also stated: "There is as yet no field-tested substitute for direct instruction on the basic core of high-frequency words needed in child and adult writing (p.1285)."

Marking Hard Spots

In his conclusions, Tireman (1927) stated, "After a study of over 4,000 pupils in grades four, five, and eight involving a half-million spellings, one is impressed with the consistency with which the data show that marking hard spots is of little or no value (p. 116-117.)."

He continued,

> The essential fact in spelling is to write all the letters and have them in the right order. Anything that diverts from this does harm. The fact stands out that the pupils who studied words with the hard spots marked made poorer scores than those who studied lists with the words unmarked. In other words, the people who advocate marking the hard spots are not only suggesting a useless device but possibly a harmful one (p. 117).

The studies of Masters (1927), Mendenhall (1930), and Rosemeier (1965) also concurred with Tierman's (1927) study that calling attention to "hard spots" was a doubtful practice.

The Corrected-Test Method

The only investigations into the value of the corrected-test as a technique for the teaching of spelling which came to the attention of the writer were studies conducted since 1940. The corrected-test procedure is one where the child corrects his own words.

A pioneer study in this area was conducted by Thomas Horn (1946). The subjects for his study were 268 sixth grade pupils in six schools, who were divided into three groups. The teaching procedures were assigned to the respective groups as follows:

Group A
1. All study and pronunciation eliminated.
2. Learning limited to effect of the test, correction of test, and a retest on Monday, Wednesday, and Friday.

Group B
1. All study and pronunciation eliminated.
2. Learning limited to effect of test and correction of test on Monday, Wednesday, and Friday.

Group C
1. All study eliminated, but Monday pronunciation retained.
2. Test and correction of test on Monday, Wednesday, and Friday.

Each group was given a recall test seven days after Friday's test. Group A, the one having a retest after each correction exercise, led in achievement with a mean number of words learned of 8.25. Group B had a mean gain of 5.20 words, while that made by Group C was 2.35 words.

As a result of his investigation into the value of the corrected test as a teaching technique, T. Horn concluded that:

(1) As measured by a final weekly test or by recall tests after an interval of seven days, the corrected test alone will contribute 90-95 per cent of the achievement resulting from the combined effect of the pronunciation exercise, corrected test and study; (2) in some classes the corrected test alone is sufficient for mastery or near-mastery of a typical spelling lesson by the upper third of the class; (3) The corrected test appears to be the most important single factor contributing to achievement in spelling (p. 29).

Tyson (1953) directed a study with 259 sixth grade pupils in which the classes were taught word lists of 12, 24, and 36 words. The word lists were compiled of 50 per cent hard and 50 per cent medium difficulty words. All words were taught by a corrected test method in which each pupil checked his own words as the teacher spelled the words orally. The incorrect part (s) of each word was underlined by the child, but there was no retest on the same day. Results were measured through use of delayed-recall tests on each list two weeks after it was studied.

Tyson concluded:

1. The mean number of words learned from the various lists was proportional to the length of the list. No length showed any marked advantage.
2. The use of the corrected test was about equally effective for the teaching of words at either of the difficulty levels employed.
3. The raw score gain was rather substantial. The mean score for the delayed-recall test was about twice the score on the first Monday test (p.174-175).

Greif (1956) in a summary of abstracts of research in spelling instruction, reviewed three other studies which were conducted during the early 1950's. A brief description of these studies will be presented in the following paragraphs.

In a limited study involving 41 seventh grade students Beseler (1953) conducted a four week experiment using a corrected test method. Each week 25 words, five of which were review words, made up the list with no study taking place outside the experimental situation. The words were presented on Monday without the students having a chance to see them ahead of time. Each child corrected his own test, after which the paper was reversed and the words presented a second time. Following correction of the second test, the papers were collected. The same procedure was followed on Wednesday and Friday with the same list of words.

After completion of the four weeks of lessons, four delayed-recall tests were given at 10, 20, 30, and 60 day intervals. These tests contained 50 words randomly selected from the weekly lists and achievement was determined on a class basis only.

The average improvement obtained on the second test on Monday was six words. The first Wednesday test gave an average score the same as the second Monday test. The average gain on the second Wednesday test was two words, and this gain was almost maintained on Friday's first test. The second test on Friday showed an average gain of just over one word. The delayed-recall tests showed an increase for the first three tests, but a decrease for the fourth test. The per cent of words spelled correctly on the final Friday tests was almost maintained on the 10th, 20th, and 30th day tests.

The value of the findings was limited by the short time given to the experiment and by the small number of students participating. No evidence was obtained to show individual improvement and no control group was used. The author concluded that the results warranted the use of the corrected test as a teaching technique since it appeared to give equal achievement in less time when compared to other generally accepted methods.

Thomas (1954) directed a study which included a comparison of the check of the corrected test with the textbook method on the first two days of the school week in grades four, five, and six. The experimental group used the effect of the corrected test on Monday and Tuesday, and the regular method the rest of the week. The control group used the regular method all of the time. The study lasted for five weeks and identical word lists were used for both groups. Complete data were available for 716 pupils at the conclusion of the study.

An initial test over all the words to be used was given to begin the study. Fourteen days after the completion of the study, a recall test was given, using the same words. Forty-two days after the end of the study, the same words were given as a delayed-recall test.

No statistically significant difference was found to favor the experimental method in any of the three grades. The mean gain for the corrected test was higher for the fourth grade on the initial and recall test, on all tests for the fifth grade, and for the initial and delayed-recall tests in the sixth grade, although the differences in all cases were not statistically significant. Thomas concluded that the corrected test method should be given serious consideration as a technique for the teaching of spelling since its use apparently achieves equal or better results while being a saving in time for both pupils and teacher.

Louis (1950) studied the problem from another angle. He used 56 sixth grade students divided into two groups with similar ability. The control group used the test-study-test method five days per week, while the experimental group used a learning by listening method only three days a week. The students were not allowed to study the spelling lesson as such. As soon as the papers were corrected they were collected by the teacher. The only time allowed to the student to view his errors was that required for the writing and correcting of the papers.

The author concluded that the corrected test alone provided mastery of the typical spelling lesson for the upper third of the class, and that there was less loss of time on the part of the bright students who used the learning by listening method. The worth of the findings and the conclusions reached were limited by the very small groups used.

Ernest Horn (1963) suggests the following factors help make the corrected test a vital rather than a routine experience:

1. Each pupil should understand that the test shows him which words he needs to study, thus affording intelligent motivation.
2. The pupil should be convinced that, by working carefully as he corrects his test, he can learn many new words in the process of correction.
3. Pupils should correct their own tests as the teacher spells each word aloud. This focuses the attention of the pupil on each word he has misspelled, as well as on the correct spelling of the word.

4. Time for the study of the words missed on the test should be provided as soon as possible, preferably immediately after the test has been corrected.
5. The teacher should give immediate help to individual pupils who have made many errors.
6. Results on the final tests should be compared with those on the first test to show what progress has been made (p. 18).

E. Horn described the corrected test as a happy instance where group instruction and adjustments to individual differences are combined. The tests are given and corrected as a group exercise, but individual pupils are concerned only with their own special needs.

The value of the corrected test was also borne out in Schoephoerster's (1962) experiment designed to ascertain the comparative value of three variations of the test-study plan of teaching spelling, featuring corrected spelling test as used by children to learn the correct spelling of the words of the weekly textbook spelling list and to retain the knowledge of the spelling of these words.

Christine & Hollingsworth (1966) attempted to discover whether the corrected-test, when used as a teaching method, would give as good or better results than a conventional spelling-teaching method.

All of the fifth grade pupils from the Campus Laboratory School, Arizona State University, Tempe, Arizona, were involved in the study. A Table of Random Numbers was used to select the experimental group and the control group. The first 13 pupils selected were assigned to the experimental group which would use the corrected-test method of teaching spelling. The remaining 13 pupils were assigned to the study-test method group.

The words used were from the spelling book adopted in this school district. The procedure for the corrected-test method group was as follows: Monday through Thursday, a test on the words was given. If any child in the group achieved mastery on any day, Monday through Thursday, he was free from any spelling assignment until Friday. Friday the weekly test was given again to all pupils in this group. No other formal study was done.

The control group used the same spelling book and the method of teaching spelling as prescribed in this book. This method followed the procedure of introducing the study of words for Monday, studying the words on Tuesday, trial test on Wednesday, study the words again on Thursday, and a final test on Friday.

After a five-week period had elapsed and five spelling units had been given, both groups were tested with a final spelling test. The 50 words used for the final test were selected from the units the pupils had been studying by using a Table of Random Numbers.

Although there were no statistically significant differences of achievement between the two groups, the authors suggest several practical considerations:

1. The Test-Study group used a five minute daily block of time compared to a minimal ten minutes daily of time for the Study-Test group. If the implications of research are followed, a basic list of words needs to mastered and this word list needs to be taught systematically. Therefore, the classroom teacher should be as efficient as possible. If this can be done in one-half the time now used in a conventional Study-Test Method, a corrected test is desirable.

2. The Study-Test group spelled better on the achievement test; however, the corrected test group achieved 94.7 per cent as well in half the instructional time. This points out that in view of the small difference in number of words learned, the Corrected-Test Method is sufficient for learning the typical spelling lesson.

3. The Corrected-Test Method does individualize the weekly word list, which each child needs to study. The Study-Test group studies all the words in the word list whether they already know them or not. This may mean the typical spelling book may be a waste of time for many.

4. In view of the above recommendations, T. Horn's (1946) conclusions that the corrected-test appears to be the best single factor contributing to success of achievement in spelling, is extended and strengthened (pp. 566-567).

Time Allotment

Larson's (1945) study was done to determine the relations that exist between the efficiency of spelling instruction and the time allotted to spelling.

Prior to the experiment, special emphasis was placed on spelling instruction via bulletins to teachers, in faculty meetings, and student-teacher talks on how to improve spelling. Grades four, five and six in two schools were used for the experiment. There were 204 pupils in all. During the second quarter of the year, one school used three periods 20 minutes in length for spelling, the other used five such periods. During the third quarter, the schools reversed allotments.

Pupils in each school who had an I.Q. below 75 on the Stanford-Binet were in special classes. The children in one school were lower in socioeconomic status, and much more transient. The lower 25 per cent of all classes, on the basis of Monday tests, working in the 60 minute week, were given special help on Tuesday and Thursday. Both the 60 minute and the 100 minute plans used the same procedure, the 100 minute plan providing for study of Monday's and Wednesday's errors on Tuesday and Thursday.

The conclusions are summed up with the statement that the reduction of time from 100 minutes to 60 minutes had little adverse effect on achievement.

T. Horn (1946) stated, ". . . time alloted for the study of spelling in excess of 60 minutes a week may be spent more advantageously in other areas (p. 30)."

E. Hern (1960) said, "What is needed is not more time but spirited, efficient use of instructional procedures (p. 1346)." Finally, he warned against the notion that a large time allotment will automatically raise spelling achievement.

Test-Study-Test Method

As a result of two years of experimentation with grades five and eight in Albany, New York, Kingsley (1923) concluded that grades using the test-study method showed much better gains in class average.

Gates (1931) directed an extensive study of 49 classes with a total of 1,558 pupils serving as the subjects. This study was concerned with the teaching of spelling in grades five through eight. The study was divided into two ten-week periods so that each group would spend a period with each method. By reversing the methods during the second period, it was possible for Gates to make the following two types of comparisons: (1) Results from the groups using two

different methods at the same time, but with the same words; and (2) Results from the same group using two different methods.

Pupils in the school were grouped according to the results of intelligence tests in order to get nearly equivalent combinations of classes within each grade. The study-test and the test-study plans were assigned so that the groups using each were comparable. Basing his conclusions on the results of a 50 word preliminary test and a 50 word final test, Gates observed:

1. The test-study method was best for bright students in all grades.
2. The test-study method was best for average students from the middle of Grade 3, on.
3. The test-study method was best for slow students from the beginning of Grade 5, on.
4. The study-test method should be used in all cases not covered by the above (pp. 7, 10, 11).

Blanchard's (1944) review of the literature indicated that the findings of twice as many studies favored the test-study method as favored the study-test method. The results of Blanchard's experimental study, in which carefully paired groups were taught by the two methods, indicated that the test-study method was significantly more valuable than the study-test method in teaching the 222 spelling demons to eighth grade children. She concluded that in any plan of study it was necessary to teach a valid and efficient method of learning to spell a word.

Fitzgerald (1953) pointed out that spelling problems are individual to the child, therefore, the test-study procedure would be of greater value in most cases. He suggested that the study-test procedure may be used in the beginning when children are able to spell none, or a very small percentage, of the assigned words.

Gates suggested that study-test method might be used in grade two. Subsequent studies done by Hibler (1957) and Montgomery (1957) clearly show that the test-study method with an immediate correction of the test, was superior to the study-test method even in grade two.

In spite of all the evidence showing the superiority of testing before study, current instructional materials and methods typically use the study-test method. E. Horn (1960) stated that "This lag between what is known and what is done in spelling instruction is discouraging (p. 1345)."

Walter Petty (1969) stated:

> . . . there is an accumulation of research evidence going back about 40 years which shows the value of the pretest in building positive attitudes in the children toward spelling instruction and in resulting high spelling achievement. In fact, finding out what a learner already knows before teaching is a teaching principle that is many years old--in all subject areas, not just spelling. It is a quite neglected principle, probably due to the association of test with grades, but one that needs revival. The evidence from spelling research very definitely shows its importance and truth. The evidence was known by many as long as ten years ago, but no commercial materials suggested it as an important procedure (pp. 86-87).

Presenting Words in List Form

A study by Hawley & Gallup (1922) was completed in an attempt to determine the relative superiority of the list method and the context method of teaching spelling. In order to make the results as true to actual conditions as possible, the study was carried on with as little modification of normal procedure in the classroom as practicable.

The research was conducted in two Rochester, New York schools. The children of both schools were from "good" English-speaking homes. Exactly 1,100 pupils taught by 32 teachers were used for the experiment. The grades ranged from third to eighth, inclusive, and the ages of the children from seven to fifteen.

The regular text for each grade was selected because it was found to furnish a sufficient amount of suitable material for the test, and because it would permit the regular program of the school to progress under as nearly normal conditions as possible.

The organization of both schools was combined and to each grade the particular method of teaching to be followed was assigned. For example, Grade VIII-A in school Number 23 used the context method, while Grade VIII-A of school Number 19 used the list method.

The experiment lasted over a period of 30 lessons and at the end of each ten lessons a test was given.

For the purpose of this experiment the time expended in spelling instruction by either method was the regular amount allowed by the Rochester schedule of 15 minutes per day in all grades except the third where 20 minutes were allowed.

The chief conclusion to be drawn from this study was that there was no advantage in having children write their spelling words in sentences. Pupils using the list method did better than those using the sentence method.

In conclusion, Hawley and Gallup (1922) stated that, "If teachers wish to test pupils on the new words of the week, as is advocated by the best authorities, and if they desire to have the spelling work reviewed within the allotted spelling time, they will use the list method (p. 310)."

McKee (1924) investigated the relative efficiency of all common column forms in the teaching and testing of spelling. The purpose was: first, to determine the relative efficiency of the common column form; second, to determine the relative efficiency of the common column form and the sentence form; and, third, to determine the relative efficiency of the common column form and the paragraph form as used in this experiment. McKee's results were as follows:

Column-Phrase Experiment

A. Improvement: The column group always showed more improvement than the phrase group during the teaching of weekly lesson and review lessons.
B. Delayed Recall Tests: It was apparent that the column group showed superior spelling ability on the delayed recall tests over the scores received on the same words in phrase form.
C. Ability to Transfer: The measurements showed that the difference between the abilities of the two groups to transfer was relatively insignificant. Slight tendency for the column group to suffer a

greater loss in transfer than the phrase group.

D. Word Meanings: There was very little correlation between spelling ability in either column or phrase form, and knowledge of the meaning of the words.

Column-Sentence Experiment

A. Improvement: The column group was only slightly superior to the sentence group in improvement during the teaching of the weekly lesson and the review lessons.

B. Delayed Recall Tests: The column group showed significant superiority in spelling ability when tested by the delayed recall tests.

C. Ability to Transfer: In the transfer tests the column group showed approximately equal ability to transfer words into new sentences.

D. Word Meanings: There was very little correlation between spelling ability, either in column or context form, and knowledge of meaning as judged in this investigation.

Column-Paragraph Experiment

A. Improvement: The column group showed greater improvement than the paragraph group during the teaching of the weekly lesson and the review lessons.

B. Delayed Recall Tests: The column group showed spelling ability superior to that of the paragraph group when tested on the delayed recall tests.

C. Ability to Transfer: The column group showed an ability to transfer these words into new paragraphs in a superior manner to the group which studied the same words in paragraph form.

D. Word Meanings: The correlations showed very little relation between spelling ability and the knowledge of the meaning of words as judged in this investigation.

According to the results of McKee's (1924) study, it appeared that the column format employed by most publishers of contemporary spelling books was the most effective way to present spelling words for study.

Strickland (1951) recognized the intelligent use of lists when she said, "As children reach the stage when they do more writing, there will be some basic words which all of them should learn. Second and third grade children need basic lists of words which all children study, as well as the individual lists which fit each child's needs (p. 214)."

T. Horn (1952) has stated the crucial question, "When the spelling needs are identified, what is the most efficient method of study? Once again going to the research, our best available evidence, not opinion, favors the list method (p. 267)."

Edward's (1951) study was to ascertain whether or not there is a difference in achievement between the following two methods of instruction in spelling. The first method was the test-study method in which children pronounced and spelled the words in a given list during three 20 minute periods per week. The second method was the method which included alphabetization, syllabication, pronunciation, use of the dictionary, and instruction in using the words outside of spelling. This method used five periods per week, 20 minutes in length.

The population was one sixth grade class of 22 pupils in a LaGrange, Illinois school. It served as both experimental and control group. Progress records for the six weeks prior to the experiment furnished the control data. The experiment totaled nine weeks. The first week, very close attention was given to the children to see that the students understood and followed the directions. Two more weeks were used for practice, and records were kept for only the last six weeks. A review achievement test was given at the end of each period, and it was made up of words randomly selected from the lists used during the last four weeks of each period, in each case. The weekly lists contained 20 words. The difference in final achievement, if any, was the object of the experiment. The experimental method was the first one mentioned earlier in this abstract, the control the second one. The control method used the contextual method of presentation, and used over two hours per week for spelling. The suspected lack of economy in such a program prompted the study.

The data gathered indicated very little difference between the control and the experimental method when viewed in terms of improvement in weekly achievement. A very slight difference was found in favor of the control method when the data was viewed in terms of the final review test.

The author also surveyed the reaction of the pupils to the program. Twenty of them preferred the experimental method. One who did not was a slow learner. The author recognized the limitations of the very small group, and the problem caused by absenteeism. The final conclusions favored the test-study-test method on the basis of almost equal results achieved in considerably less time per week. The conclusion was thought to be warranted, as the method was also proven more favorable on the basis of the children's opinions. Even if the preference was because of its novelty or simplicity, if the preference was real, then for that reason it is a better method. That some of the pupils preferred, or indicated preference because they thought they were expected to, was not overlooked.

E. Horn (1944), McKee (1924) and Winch (1916) all concurred that the presentation of words in context is less efficient than their presentation in list form, except in so far as context is necessary to identify the words in giving a test.

E. Horn (1963) stated that:

> Research has consistently shown that it is more efficient to study words in list than in context. Words studied in lists are learned more quickly, remembered longer, and transferred more readily to new context. Occasional lessons may be justified in which words are presented in context for the purpose of encouraging children to do certain types of writing; such as, writing invitations, thank-you notes, and letters to classmates who are ill at home (p. 16).

Presenting Words by Syllables

T. Horn's (1947) investigation was undertaken to determine the effect of the visual presentation of words by syllables on learning to spell, and to discover which types of words, if any, benefit from syllabic presentation, and to what degree.

The study was performed in two parts. A set of criteria was developed for choosing the words to be used in both parts so as to avoid using only words that lent themselves more readily to syllabication.

The words chosen for use in Part I of the study were taken from the spelling texts used in the schools involved. Since monosyllabic words could not be used, the sixth grade was chosen, and 760 pupils from schools in three Iowa cities were the subjects. This phase lasted four weeks, therefore, four lists of 25 words were made. The class was used as the sampling unit. Half of each class was assigned at random to each method, the non-syllabicated, and the syllabicated.

On Monday the words were first pronounced and then a pre-test was given, which was then corrected by the pupils. On Tuesday needed study was done. A second test was given and immediately corrected on Wednesday. Needed study was again done on Thursday, and the final test was given on Friday. Materials were taken up each day and re-distributed the following day. A recall test on the combined lists, totaling 100 words, was given two weeks after the final Friday, and a delayed recall test was given one month after the final Friday.

Part II involved the effort to determine which of the following five types of words would benefit from syllabic presentation, and the effect of such a presentation on the learning of pupils at various levels of ability. The types chosen were (1) words in which there is no obvious connection between syllabification and learning to spell, (2) words which have been found to provide difficulty in pronunciation, (3) those found to contain suffix and prefix difficulties, (4) those found to contain double consonant difficulties, and (5) those which, if syllabicated, may cause spelling errors.

The subjects were 1,000 fifth grade pupils from three Iowa cities. The time devoted to this part was in addition to the regular spelling period, and continued for five weeks, one of the above categories of words being used each week. Classes were divided by number, the even number classes using the syllabicated form, the odd classes the non-syllabicated form. The words were pronounced on Monday, after which the pre-test was given and corrected by the children. This was followed by a re-test which again was corrected by the children. This same procedure was followed each Monday. A recall test was given seven days after the original test, and 28 days after the last experimental day.

The results for Part I showed a mean gain of one-tenth of a word in favor of the syllabicated presentation, and this was considered to be insignificant. On Part II, no significant difference was shown in any week, though near significance was shown in the recall test for the second week in favor of the undivided method.

The five generalized types, when subjected to item analysis, showed no significant difference between the methods except for five words in the fifth week, where there was a significant difference in favor of the undivided method. When the subjects were divided on the basis of spelling ability, no significant difference was found between the methods for either superior or inferior spelling ability.

Four conclusions were thought to be warranted. First, there was no advantage in presenting words in syllabified form. Second, no generalized group gives any indication of an advantage to syllabified presentation. Third, no advantage in syllabic presentation was found at either the superior or inferior levels of ability. Fourth, for words which, if syllabified, may cause errors in spelling, there was evidence of a disadvantage if presented in syllabified form.

Humphry's (1954) study was completed in an effort to determine the effect of syllabic pronunciation of words on learning to spell. It was concerned specifically with the effect of the oral pronunciation of words by syllables upon learning to spell, and with what effect, if any, the syllabic pronunciation would have on learning to spell words which, if syllabicated, might more easily be misspelled.

Seventeen classes of the sixth grade in the Austin Public Schools, Austin, Texas were selected to obtain two groups fairly well balanced in terms of socioeconomic status. Both groups were 100 per cent Latin-American. A total of 510 began the study, but only 289 furnished complete data. Only unstudied polysyllabic words were used. There were 45 of these, and they were taken from the regular textbook. There were also five words used in which it was suspected the syllabication might be a major cause for misspellings. All study outside of spelling class was prevented.

The duration of the experiment was six weeks. A pre-test was given, then two weeks of experimental tests followed, and finally a recall test 34 days after the first experimental test, and a delayed recall test 41 days after the first experimental test. The investigator made the first presentation in all classes, the regular teacher continued from then on.

Only two days per week were utilized. Pronunciation of the word and the corrected test technique were used on Monday. Only the corrected test technique was used on Wednesday. There was no study other than this. The mean reductions of misspelled words as compared to the score on the pre-test were calculated for each class and used in the statistical analysis.

All differences between the two methods for both groups over the two lists of words favored the non-syllabic pronunciation form of presenting words for the tests, but this was not significantly so. A total of 423 pupils furnished data for the five words which were thought to be more readily misspelled if they syllabicated. Differences for two of the words favored the syllabic pronunciation form of presentation, while the other three favored the non-syllabic, but again these were not significant differences.

It was concluded that there was no apparent advantage in presenting words in an oral syllabified form and that there was no evidence to indicate that syllabification was a hindrance to the words that it was thought to be.

In T. Horn's (1969b) review of spelling studies he stated that, "The visual presentation of words in syllabified form has not demonstrated any advantage over the undivided method of word presentation, and for some words (e.g., purpose, therefore) there is a negative effect (p.1289)."

Spelling Rules

The teaching of rules and the learning of principles of spelling have been quite controversial issues for more than 50 years. Sartorius (1931) examined 20 spellers and found that two presented no rules and four contained 48 rules. Others ranged between the extremes.

Principles of spelling that have few exceptions and cover a fairly large number of words may profitably be developed by children under the guidance of the teacher.

Thorndike (1941) has stated that:

> A very large proportion of the words written by adults and children contain prefixes and suffixes added to Engli[illegible] base words. These derived forms tend to be harder than base words, and in some instances very much harder. It seems reasonable to expect that some attention to the way in which prefixes and suffixes are added to base words would improve the spelling of derived forms as well as expand the students' written vocabulary (p. 81).

The available research done by Archer (1930b), Fitzgerald (1951), Foran (1934), King (1932) and Sartorius (1931) on the effectiveness of such practice was rather consistently favorable; applying chiefly to the adding of suffixes.

E. Horn (1960) stated:

> The only rules that should be taught are those that apply to a large number of words and have few exceptions. The following rules meet these requirements:
>
> (a) The rules for adding suffixes (changing y to i, dropping final silent e, doubling the final consonant.).
> (b) The letter q is followed by u in common English words.
> (c) English words do not end in v.
> (d) Proper nouns and most adjectives formed from proper nouns should begin with capital letters.
>
> There are other rules that have few, if any, exceptions: the rules for the use of periods in writing abbreviations and for the correct use of the apostrophe to show possession or the omission of letters in contractions (p. 1345).

In an earlier study, E. Horn (1919) consistently expressed doubts that spelling rules based on sound-to-letter relationships could replace direct instruction of words. He wrote:

> Most of the articles dealing with the subject contain a peculiar fallacy, namely, that by discovering that words are covered by a given rule, one may discover the efficiency of teaching that rule . . . one must show . . . that rule can be easily taught, that it will be remembered, and that it will function in the stress of actual spelling. Evidence seems to cast a doubt on all three of these assumptions . . . (pp. 60-61).

E. Horn (1954) found it possible to conclude that "the limited success in attempts to teach pupils to learn and apply even a few spelling rules suggests that we should not be too optimistic about the practicability of teaching the more numerous and complicated rules or principles in phonetics (p. 234)." With greater finality, E. Horn (1957) wrote that, "There seems no escape from the direct teaching of the large number of common words which do not conform in their spelling to any phonetic or orthographic rule (p. 432)." Later in 1957, writing for the Encyclopedia of Educational Research, E. Horn (1960) listed the types of evidence which must be recognized as possible limitations to the benefits of teaching phonetic generalizations:

1. Over one-third of the words in A Pronouncing Dictionary of American English have more than one acceptable pronunciation due to regional and cultivated differences.

2. Many different spellings can be given most sounds and even the most common spellings have numerous exceptions.
3. A majority of words contain silent letters, and about a sixth are spelled with double letters even though only one of the letters may be pronounced.
4. Responses become uncertain when more than one reasonable choice is available, such as "bizzy for busy, honer for honor."
5. Unstressed syllables characterized by the schwa or short i sound are very hard to spell by sound.
6. Any spelling rule, phonetic or orthographical, can be used incorrectly as well as correctly.
7. Some spelling elements are fairly consistent, such as word positions and the adding of prefixes and suffixes. More adequate evidence is needed to realize the value of relating sounds to symbols, but it appears that such value "should be utilized as an aid to spelling rather than as a substitute for the direct study of these words (p. 1345)."

E. Horn's view was not one-sided, however, as he demonstrated in his research pamphlet, Teaching Spelling (1963):

> When dependable evidence is available . . . it is entirely possible that teaching sound-letter relationships will be regarded as an essential part of the spelling program . . . . Even though the evidence is meager on some important matters, it seems to justify considerable emphasis upon phonics . . . . Instruction and phonics should be regarded, however, as an aid to spelling rather than as a substitute for the systematic study of the words in the spelling list (p. 24).

One question in the debate of generalizations has dealt with the ability of learners to apply spelling rules to their general spelling requirements. Cook (1912) found that out of seven spelling rules learned earlier by college and high schools students, only one rule was of real value. That rule stated that words ending in ie, such as lie, change the ie to y before adding the suffix ing. Turner (1912) reported that results with a group of 16 pupils taught by the method of direct drill without reference to spelling rules were superior to results obtained from another group of 16 pupils taught with reference to spelling rules. The two groups were matched prior to the study of spelling rules.

Archer (1930b) reported negative transfer operating in pupils' (fifth and seventh grades) spelling of certain words; his findings showed that children generalized from experience with one type of words and misapplied the generalizations to other words. Archer, therefore, concluded a rule must be justified by its lack of ambiguity in application.

Sartorius (1931) concluded from her study of generalization in spelling that rules should be treated with caution until experimental evidence concerning their functional value is secured. King (1932) reported that the teaching of spelling rules appeared to be impractical, considering unsatisfactory results in a study where a limited set of spelling rules were taught. King concluded that it would be very hard for children to learn to apply the many complicated rules that would be necessary for comprehensive spelling ability.

Jackson (1953) reported that no statistically significant increase in spelling achievement was found in comparison between classes receiving extra

phonetic instruction in spelling and classes acting as controls. Jackson concluded that extra phonetic instruction for the experimental classes was not worth the time spent in overlearning phonetic relationships. It may well be, however, that inefficient teaching methods made significant contributions to the failure and hindered benefits from teaching generalizations.

The following research findings and conclusions are those supporting a greater emphasis on teaching spelling rules utilizing phonetic relationships.

Lester (1917) countered critics of the use of spelling rules with a well-argued article stressing the helpful and short-cut nature of common spelling rules. Lester, however, emphasized the point that spelling rules should be taught as necessary tools with which to perform a piece of work and wrote in a manner which did not place him entirely in an "either-or" position.

Watson (1926) reported two studies dealing with competency in spelling. In one study, individual high school students were taught either spelling rules or spelling words by drill; in the second study, two different high school classes were compared--one received instruction in spelling rules and the other received class drill. In both studies, the results favored instruction in spelling rules.

Carroll (1930) presented findings of a comparative study of the ability of bright and dull children to make use of spelling generalizations. Carroll found positive results in the use of spelling rules by bright children and negative results for dull children, and concluded that the group differences in spelling errors were due to the marked superiority of the bright over the dull in phonetic generalization ability.

Archer (1930a) pursued a suggestion he gained from his earlier study that a spelling rule would be useful if it could be applied to enough words to justify its use and taught to be applied in proper situations through inductive and deductive methods. In the follow-up study, Archer (1930a) reported statistically significant results supporting the instruction of one spelling generalization. He wrote:

> We must . . . recognize that the question as to how a rule is taught is just as important as what is taught. We must develop the rule in a psychological manner and teach it in a way that will function in the words to be spelled (p. 63).

The most elaborate efforts to emphasize the value of spelling generalization and the relationship of sound and letter have been made by Paul R. Hanna (1965) and his colleagues at Stanford University. Their main contention is that the "American-English language is not based upon a one-to-one relationship between phoneme and grapheme, but that there are patterns of consistency in the orthography which, based upon linguistic factors, may be said to produce correspondence that are surprisingly consistent (p. 22)."

Hanna and Moore (1953) presented an article that has received much attention. It has become well-known, because it has been cited as evidence for the support of instruction in spelling rules dealing with letter representations of sounds; and it has drawn considerable criticism from opponents, such as E. Horn and Petty, for the interpretations Hanna and Moore made from the results of their study. The study dealt with an investigation of a 3,000 word spelling list to determine the extent to which each speech sound in the words comprising the spelling vocabulary of the elementary school child is represented consistently in writing

by a specific letter or combination of letters. According to the researchers, the results indicated that sounds to a high degree were consistently represented by particular letters. One finding showed that approximately four-fifths of the phonemes contained in the words comprising the spelling vocabulary of the elementary school child are represented by a regular spelling.

Hanna and others (1964) at Stanford University have conducted extensive studies involving the computerized analysis of a vocabulary of 17,000 words. From this analysis these investigators report that:

> The great majority of individual phonemes of oral American-English are indeed consistently represented in writing by particular graphemic options when the main components of the phonological structure underlying the orthography are taken into consideration. Without regard to their occurrences in respective positions in syllables, consonant phonemes collectively were represented by an equal number of graphemic options over 80 per cent of the time in the selected list of words (p. 4).

As a second phase of this study, the investigators devised a set of rules for spelling the 17,000 words. This programming took into account 1) the simple phoneme-grapheme relationships, 2) the effect of position of a phoneme in a syllable, and 3) the effect of syllabic stress upon choice of graphemic option. A fourth factor, identified as "internal constraints"--such as a particular phoneme following another in a word--was also used. Results from this computerized spelling were reported as 49 per cent of the words being spelled correctly, 37.2 per cent with only one error, 11.4 per cent with two errors, and 2.3 per cent with three or more errors.

From these studies, Hodges and Rudorf (1965) report that "even a limited knowledge of the phonological relationships between the sounds and the letters of the orthography can provide the power to spell literally thousands of words . . . (p. 532)."

The data analyzed in the Stanford Study by Hanna and others have been used to suggest word selection and gradation according to linguistic principles in order to make possible an almost unlimited correctly spelled writing vocabulary. T. Horn (1969a) stated that:

> Any rush to immediately translate the findings of the Stanford Study into textbook form would seem to be premature. There have been no data reported as yet which would provide answers or partial answers to such questions as:
>
> (1) which phonological generalizations have the greatest potential value for students learning to spell;
> (2) which generalizations should be taught and which should be left to the student to discover;
> (3) which generalizations are likely to be misapplied;
> (4) to what extent can students establish generalizations intuitively (and may yet be unable to state them) and successfully apply them in writing.
>
> Research attention should now be directed to obtaining answers to the above questions. Some beginnings have been made. In addition, further analyses of the data are needed by linguistic specialists (p. 211).

With the increased interest in phoneme-grapheme relationships that arose in the 1950's and the completion of the Stanford Studies by Hanna and others, investigations have been made regarding the selection and grade placement of words to be studied according to linguistic principles, with child and adult writing needs assuming lesser roles. T. Horn (1969b) stated however, "No evidence has been reported concerning the effectiveness in actual classrooms of word selection based upon linguistic principles (p. 1284)."

Other Pertinent Observations

Games and special devices are often suggested as an aid to spelling. The evidence of Fitzgerald (1951), E. Horn (1960) and T. Horn (1969b) suggested that some of these may be of some benefit. They should supplement rather than supplant systematic instruction. However, supplementary practices should be meaningful.

Concerning writing words in the air, Green and Petty (1968) stated that:

> The practice of writing words in the air is of doubtful value. This practice takes time and does not give the child a realistic image of the word. Supposedly this practice is to give a kinaesthetic impression of the word, but the result is questionable, since arm and hand movements are generally not the same as in writing a word. A kinaesthetic impression may be useful to a few very poor spellers, but such impression could better be gained through finger-tip impression in sand or on the blackboard (p. 332).

Children should not be required to make repeated writings of words without intervening attempts at recall. Green and Petty (1968) believed the practice of having a child copy a word five times, or ten times, encouraged poor habits and attitudes.

The practice of intervening recall has been shown to be beneficial in all fields of learning, and the studies done by Abbott (1909) and E. Horn (1967) showed the usefulness of recall for both initial learning and review lessons.

Studies conducted by Columba (1926), Diserens and Vaughn (1931), Forlano (1936), E. Horn (1960, 1967), D. Russell (1937), Sand 1938) and Thorndike (1935) indicated that intrinsic incentives for learning to spell, such as positive attitudes and interest, are preferred to the extrinsic incentives of school grades and competition.

CHAPTER III

ANALYSIS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter presents a summary of the study, conclusions based on the findings, a summary of what the field research indicates on each of the 20 items, and implications of the findings. A more comprehensive analysis of the field research can be found in Chapter II. (See Appendix A for the research instrument.)

Summary of the Study

The purpose of this study was to find the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six were aware of supported and non-supported research procedures in spelling. In addition the study was designed to ascertain the degree to which this representative sample of teachers were utilizing or not utilizing selected research procedures in teaching spelling to their pupils.

The specific problems in this study were: (1) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching grades two through six agree or disagree with research-supported procedures in spelling, (2) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize or do not utilize research-supported procedures in spelling, (3) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six agree or disagree with procedures in spelling which are not supported by research, (4) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize or do not utilize procedures in spelling which are not supported by research.

The data were gathered utilizing an attitudinal questionnaire developed in accordance with the recommendations found in Parten (1966). The survey instrument was divided into three major sections: (1) PART I--General Information, (2) PART II--Twenty Supported and Not-Supported Research Procedural Statements, and (3) PART III--The Utilization of Twenty Supported and Not-Supported Research Statements.

Of the 1,472 questionnaires sent to the elementary teachers, 1,289 or 88 per cent were completed and returned. A copy of the questionnaire designed for the study can be found in Appendix A.

Tables 1 and 2 offer a quick summary of results for both research and non-research supported statements. Table 1 shows the degree of agreement, disagreement and undecideness for each research supported item. It also shows the degree of utilization for each of the research supported items.

Table 2 shows the degree of agreement, disagreement, and undecidedness for each of the non-research supported items. In addition the degree of utilization is likewise shown.

TABLE 1

Distribution of Responses to the Ten Research Supported Statements
And Distribution of Utilization of the Practices

Statement # Part II	Agree		Disagree		Undecided	
	N	%	N	%	N	%
6	404	31.7	518	40.6	353	27.7
8	1175	91.9	29	2.2	74	5.8
10	1028	80.3	133	10.3	120	9.4
11	401	31.8	538	42.7	323	25.6
14	169	13.3	1007	79.3	94	7.4
15	73	5.7	1083	85.1	117	9.2
17	252	19.8	1211	77.8	398	27.4
18	279	22.2	1092	54.0	288	22.9
19	740	58.5	336	26.6	189	14.9
20	526	41.4	347	27.3	398	31.3

Degree of Utilization (%)

Statement # Part II Counterpart	Statement Part III	Almost Always	Frequently	Sometimes	Infrequently	Almost Never
6	9	25.3	28.8	25.6	10.3	10.0
8	19	31.2	43.9	18.2	4.9	1.8
10	17	6.4	33.8	39.7	12.9	5.2
11	4	12.9	22.0	30.5	11.6	22.9
14	6	1.5	3.0	12.0	23.1	60.4
15	12	3.5	5.7	20.3	31.5	39.0
17	15	14.8	17.4	35.2	17.4	15.2
18	3	6.0	15.2	32.0	25.6	21.2
19	1	72.3	13.3	5.7	3.3	5.4
20	11	17.8	13.0	17.5	17.0	34.8

TABLE 2

Distribution of Responses to the Ten Statements Not Supported by Research And Distribution of Utilization of the Practices

Statement# Part II	Agree		Disagree		Undecided	
	N	%	N	%	N	%
1	740	58.5	203	16.0	323	25.5
2	364	29.6	665	54.0	202	16.4
3	597	46.6	392	30.6	292	22.8
4	998	78.4	129	10.1	147	11.5
5	1188	92.6	32	2.4	63	4.9
7	657	51.3	390	30.5	234	18.3
9	1199	93.9	29	2.3	49	3.8
12	717	56.2	260	20.4	298	23.4
13	346	27.1	472	37.0	459	35.9
16	479	37.6	385	30.2	408	32.1

Degree of Utilization (%)

Statement# Part II Counterpart	Statement Part III	Almost Always	Frequently	Sometimes	Infrequently	Almost Never
1	5	14.3	28.8	32.9	13.2	10.9
2	7	9.1	23.5	37.9	15.4	14.1
3	13	12.1	21.1	32.7	15.5	18.7
4	18	6.7	21.0	31.2	26.6	14.5
5	20	53.1	33.1	10.7	1.8	1.5
7	8	47.5	18.2	11.6	8.1	14.6
9	10	15.3	31.3	29.5	14.3	9.6
12	16	15.5	31.1	32.5	13.0	7.9
13	14	1.2	7.3	20.2	15.7	55.7
16	2	24.0	33.8	28.4	8.1	5.7

Summary of the Findings

(Item 6, PART II) Research Supported

Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form

and its counterpart

(Item 9, PART III) Research Supported

As an elementary teacher I have pupils study their spelling words in a list or column form. (See Table 3, Appendix D)

Summary of What the Field Research Indicates

In the study conducted by Hawley and Gallup (1922), they stated that, "If teachers wish to test pupils on the new words of the week, as is advocated by the best authorities, and if they desire to have the spelling work reviewed within the allotted spelling time, they will use the list methods (p. 267)."

E. Horn (1944), McKee (1924) and Winch (1916) all concurred that the presentation of words in context is less efficient than their presentation in list form, except in so far as context is necessary to identify the words in giving a test.

E. Horn (1936) stated that,

> Research has consistently shown that it is more efficient to study words in list than in context. Words studied in lists are learned more quickly, remembered longer, and transferred more readily to new context. Occasional lessons may be justified in which words are presented in context for the purpose of encouraging children to do certain types of writing. . . (p. 16).

Discussion: (Item 6, Part II)

The field research on this procedural item indicates that presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form. Yet 353 of the teachers indicated they were undecided about the statement and another 518 respondents either disagreed or strongly disagreed with the procedural statement. It is also interesting to observe that of the 353 teachers who were undecided, 58.7% either almost always or frequently employed this procedure. A total of 427 teachers indicated they disagreed with the statement but there appear to be some inconsistencies because 36.5% of this group indicated they almost always or frequently employed this approach in their teaching and another 33% who disagreed said they sometimes utilize this procedure.

(Item 9, Part III)

The field research on this item indicates that having pupils study their spelling words in a list or column form is a more successful method than presenting spelling words in sentences or paragraph form. Yet 327 (25.6%) teachers indicated they employed this item sometimes. Another 259 (20.3%) teachers indicated they employed this statement either infrequently or almost never.

There were 689 (54.1%) respondents who indicated they either almost always or frequently employ this item in their teaching. But of the 367 (28.8%) teachers who frequently employ this practice, 29.7% indicated they either disagreed or strongly disagreed with the procedural item.

Conclusions: (Number of Respondents = 1,275)

1. In spite of the present research this study indicated that 518 (40.6%) teachers either disagreed or strongly disagreed with the procedural statement. A large percentage of these respondents indicated they either almost never or infrequently utilized this procedure in their classes.

2. There are some inconsistencies with regards to the undecided group. A total of 353 (27.7%) teachers indicated they were undecided, but 58.7% of this group indicated they either almost always or frequently utilized this procedure in their classroom.

(Item 8, PART II) Research Supported

The spelling words of highest-frequency in child and adult writing should be studied by elementary school children

and its counterpart

(Item 19, PART III) Research Supported

As an elementary teacher I teach the words of greatest-frequency in child and adult writing. (See Table 4, Appendix D)

Summary of What the Field Research Indicates

Hollingsworth's (1965) research was conducted in order to determine if E. Horn's (1926) list of 10,000 Words Most Commonly Used in Writing was still useful as a basis for present spelling lists. Hollingsworth's results agreed with the known research. E. Horn's study showed a very small amount of loss or gain in word usage.

In attempting to determine the age of his 5,000 words of greatest-frequency in the 10,000 Words Most Commonly Used in Writing, E. Horn (1939) stated:

> Less than 4 per cent of these words have come into the language since 1849, and less than 10 per cent have come in since 1749. More of these words were in the language before 1099 than have come into the language since 1799 (p. 134).

T. Horn (1969b) stated:

> "There is as yet no field-tested substitute for direct instruction on the basic core of high-frequency words needed in child and adult writing (p. 1285)."

Discussion: (Item 8, PART II)

The field research on this procedural item indicates that spelling words of highest-frequency in child and adult writing should be studied by elementary

school children. As indicated in Table 4, the vast majority of respondents, 1,175 (91.9%), appeared to concur with this procedural item. Only 26 (2.0%) teachers indicated they disagreed and only another 3 (0.2%) indicated they strongly disagreed.

(Item 19, PART III)

The field research on this item indicates that children should study the words of greatest-frequency in child and adult writing.

A majority of the teachers agreed--960 (75.1%)--that children should study the words of greatest-frequency in child and adult writing. It is of interest to note that of the 233 (18.2%) teachers who said they sometimes employed Item 19, 87.5% of this group of teachers indicated they either strongly agreed or agreed with the counterpart procedural statement in PART II.

This is also evident when analyzing those teachers who infrequently employed this practice. Of the 63 (4.9%) teachers who said they employed the practice infrequently, 64.5% either strongly agreed or agreed with the procedural statement.

Conclusions: (Number of Respondents - 1,278)

1. The majority of respondents, 1,175 (91.9%), indicated they were in agreement with the field research on these particular items. The vast majority of the 1,175 teachers also stated they either almost always or frequently utilized this procedure.

(Item 10, PART II) Research Supported

The major contribution of spelling games is the stimulation of pupil interest

and its counterpart

(Item 17, PART III) Research Supported

As an elementary teacher I use spelling games to supplement direct instruction in learning to spell. (See Table 5, Appendix D)

Summary of What the Field Research Indicates

Games and special devices are often suggested as an aid to spelling. The evidence of Fitzgerald (1951), E. Horn (1960) and T. Horn (1969b) suggested that some of these games may be of some benefit. They should supplement rather than supplant systematic instruction.

Discussion: (Item 10, PART II)

The field research on this procedural item indicates that the major contribution of spelling games is the stimulation of pupil interest.

A total of 1,028 (80.3%) teachers indicated they concur with the procedural statement. It is interesting to note that of the 863 teachers who indicated they agreed with the item, 42.8% of this group stated they sometimes employed this procedure.

(Item 17, PART III)

The field research on this item indicates that the major contribution of spelling games is that of supplementing direct instruction in learning to spell.

There were 541 (42.2%) teachers who stated they use spelling games to supplement direct instruction.

Of interest was to note that of the 508 (39.7%) teachers who stated they sometimes utilized this item, 81.3% indicated they either strongly agreed or agreed with procedural Item 10 in PART II.

There are also some inconsistencies with the 165 (12.9%) teachers who stated they employed this technique infrequently. Although they employed it infrequently, 70.9% said they either strongly agreed or agreed with procedural Item 10 in PART II.

Conclusions: (Number of Respondents = 1,281)

1. A total of 1,028 (80.3%) teachers indicated they concur with the procedural statement. That is, they are in agreement with the field-research results. The majority of these respondents stated they either almost always or frequently utilized this procedure in their classes.

2. There were several inconsistencies which indicated a lack of monotonic relationship between theory and practice statements. It is of interest to note that of the 130 (10.1%) teachers who disagreed with the item, 43.8% indicated they either almost always or frequently employed this procedure in their classrooms. Another 34.6% of the teachers in this group sometimes employed the procedure. Finally, it is of interest to observe that of the 863 (67.4%) teachers who indicated they agreed with the procedural item, 42.8% of this group stated they sometimes employed this practice. Within this particular column there is evidence which indicates a lack of strong directional relationship between theory and practice.

(Item 11, PART II) Research Supported

The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell

and its counterpart

(Item 4, PART III) Research Supported

As an elementary teacher I have each child correct his own spelling test. (See Table 6, Appendix D)

Summary of What the Field Research Indicates

As a result of T. Horn's (1946) investigation into the value of the corrected test as a teaching technique, he concluded that:

(1) As measured by a final weekly test or by recall tests after an interval of seven days, the corrected test alone will contribute

from 90-95 per cent of the achievement resulting from the combined effect of the pronunciation exercise, corrected test and study; (2) In some classes the corrected test alone is sufficient for mastery or near-mastery of a typical spelling lesson by the upper third of the class; (3) The corrected test appears to be the most important single factor contributing to achievement in spelling. (p. 29).

The value of the corrected test was also borne out in Schoephoerster's (1962) experiment designed to ascertain the comparative value of three variations of the test-study plan of teaching spelling.

The study completed by Christine & Hollingsworth (1966) concurs with T. Horn's earlier experiment that the corrected test appears to be the best single factor contributing to success of achievement in spelling.

Discussion: (Item 11, PART II)

The field research on this procedural item indicates that the child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell. Although the research indicates the value of this procedure, there were 538 (42.7%) teachers who indicated they disagreed or strongly disagreed with the item and another 323 (25.6%) respondents who indicated they were undecided concerning the procedural statement. Only 401 (31.8%) of the 1,262 respondents indicated they strongly agreed or agreed with the statement.

(Item 4, PART III)

The field research on this item indicates that each child should correct his own spelling test.

There were 441 (34.9%) teachers out of 1,262 who either almost always or frequently had the children correct their own spelling tests.

It is interesting to observe that of the 385 (30.5%) teachers who indicated they sometimes employed this item, 40.0% of this group said they disagreed with procedural Item 11, PART II.

Another 436 (34.5%) teachers indicated they almost never or infrequently had the children correct their own spelling tests.

Conclusions: (Number of Respondents = 1,262)

1. Although the field research has shown the major value of the corrected test method, a total of 538 (42.7%) teachers indicated they either disagreed or strongly disagreed with the procedural statement. A large percentage of these respondents indicated they either almost never or infrequently utilized this procedure in their classes.

2. Another 323 (25.6%) teachers claimed they were undecided concerning the item.

3. Only 401 (31.8%) of the 1,262 respondents indicated they strongly agreed or agreed with the procedural statement. The majority of this group of teachers indicated they either almost always or frequently utilized this procedure in their teaching.

(Item 14, PART II) Research Supported

In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words

and its counterpart

(Item 6, PART III) Research Supported

As an elementary teacher I refrain from teaching the meanings of most weekly spelling words. (See Table 7, Appendix D)

Summary of What the Field Research Indicates

E. Horn (1960) stated that, "Since the words taught in the first six grades are those most often used by children in writing, most of these words are familiar to the children. The arbitrary practice of teaching the meaning of each word is therefore a wasteful practice (p. 1346)."

T. Horn (1969b) concurred with the aforementioned.

Discussion: (Item 14, PART II)

The field research on this item indicated that in order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words.

A total of 1,007 (79.3%) indicated they do not agree with the procedural item. The majority of these respondents have also indicated they employed this procedure either infrequently or almost never.

It is interesting to observe that of those 23 (1.8%) teachers who strongly agreed with the procedure, only 4.3% indicated they either almost always or frequently utilized the item. This same observation can be made with those teachers who agreed with the procedure. Of the 146 (11.5%) respondents who indicated they agreed with the statement, only 11.6% indicated they either almost always or frequently employed the procedure.

Ninety-four (7.4%) teachers indicated they were undecided about this item. Yet 74.4% of this group indicated they utilized this item either infrequently or almost never.

(Item 6, PART III)

The field research on this item indicates that it is not necessary for children to learn the meanings of most of their weekly spelling words.

Only 57 (4.5%) of the teachers in this study refrained from teaching the meanings of most weekly spelling words.

A large percentage of teachers, 1,061 (83.5%), stated they either almost never or infrequently employed this practice of refraining from teaching the meanings of most weekly spelling words.

It is of interest to note that of the 152 (12.0%) teachers who indicated they sometimes employed the practice, 71.0% disagreed or strongly disagreed with procedural Item 14, PART II.

Conclusions: (Number of Respondents = 1,270)

1. Although the field research indicates that teaching the meanings of most words is a wasteful practice, this study has clearly shown that a total of 1,007 (79.3%) teachers responding indicated they either disagreed or strongly disagreed with this statement. The vast majority of these respondents indicated they either almost never or infrequently utilized this practice in their teaching.

2. It is interesting to observe that of the 146 (11.5%) respondents who indicated they agreed with the statement, only 11.6% of this group indicated they either almost always or frequently employed the practice in their classes.

3. Ninety-four (7.4%) teachers indicated they were undecided about this statement. Yet 74.4% of these teachers indicated they utilized this item either infrequently or almost never. It appears that the teachers in this category (undecided) are really not undecided when it comes to employing or not utilizing the technique in their classes.

(Item 15, PART II) Research Supported

Spelling lists derived from the various curricular areas are of little value in increasing spelling ability

and its counterpart

(Item 12, PART III) Research Supported

As an elementary teacher I refrain from using spelling words derived from other curricular areas. (See Table 8, Appendix D)

Summary of What the Field Research Indicates

E. Horn in his studies of 1919, 1926 and 1960 pointed out the fact that little was to be gained by teaching a large number of words.

T. Horn (1969b) said:

> . . . those who contend that a locally devised list of words (if based on counts approaching those of Fitzgerald, E. Horn, and Rinsland) will deviate significantly from the high-frequency words already identified are in for disallusionment evidence has already shown that the high-frequency vocabulary in children's and in adult writing is very similar. Over and above the security segment of the spelling curriculum, pupils should be free to pursue their own special interests and needs and should be encouraged to do so. Nevertheless, local school districts can better employ staff time in other ways than in attempting to develop a local list of spelling words to be learned (p. 1288).

Discussion: (Item 15, PART II)

The field research on this item indicates that spelling lists derived from the various curricular areas are of little value in increasing spelling ability.

Yet 1,083 (85.1%) indicated they either disagreed or strongly disagreed with the procedural item. It is also interesting to observe that of the 117 (9.2%) teachers who indicated they were undecided concerning the statement, 48.7% indicated they employed the procedure either infrequently or almost never.

Even though the field research on this item indicates the value of this procedural statement, only 73 (5.7%) of the respondents indicated they either strongly agreed or agreed with the item.

(Item 12, PART III)

The field research on this item indicates that spelling words derived from other curricular areas are of little value in increasing spelling ability.

Even though the field research has shown very little value in using this technique, only 118 (9.2%) out of 1,273 teachers stated they either almost always or frequently employed the item. Interesting to observe is the fact that within each of these two groups the majority of teachers either disagreed or strongly disagreed with the procedural item in PART II.

Of the 258 (20.3%) teachers who sometimes employed the item, it is interesting to observe that 74.4% of this group either disagreed or strongly disagreed with the procedural item found in PART II.

A total of 897 (70.5% teachers stated they either almost never or infrequently employed the practice of refraining from using spelling words derived from other curricular areas.

Conclusion: (Number of Respondents = 1,273)

1. In spite of the field research on this item, a total of 1,083 (85.1%) teachers indicated they either disagreed or strongly disagreed with the procedural statement. The majority of these teachers stated they either almost never or infrequently utilized this procedure in their teaching.

2. There were several inconsistencies with regards to those teachers who agreed or who were undecided. Of the 117 (9.2%) teachers who stated they were undecided, 48.7% indicated they employed the item either infrequently or almost never. Of 63 (4.9%) teachers who agreed, 46.0% indicated they employed this procedure either infrequently or almost never.

(Item 17, PART II) Research Supported

Learning words by the whole method is a better technique than learning words by syllables

and its counterpart

(Item 15, PART III) Research Supported

As an elementary teacher I teach the spelling words by the whole method as opposed to the method of learning words by syllables. (See Table 9, Appendix D)

Summary of What the Field Research Indicates

T. Horn's (1947) investigation was undertaken to determine the effect of the visual presentation of words by syllables on learning to spell, and to discover which types of words, if any, benefit from syllabic presentation, and to what degree.

Four conclusions were thought to be warranted from Horn's study. First, there was no advantage in presenting words in syllabified form. Second, no generalized group gives any indication of an advantage to syllabified presentation. Third, no advantage in syllabic presentation was found at either the superior or inferior levels of ability. Fourth, for words which, if syllabified, may cause errors in spelling, there was evidence of a disadvantage if presented in syllabified form.

In T. Horn's (1969b) review of spelling studies he stated that, "The visual presentation of words in syllabified form has not demonstrated any advantage over the undivided method of word presentation, and for some words (e.g., purpose, therefore) there is a negative effect (p. 1289).

Discussion: (Item 17, PART II)

The field research on this procedural item indicates that learning words by the whole method is a better technique than learning words by syllables.

Table 13 shows that only 252 respondents out of 1,271 strongly agreed or agreed with the procedural item.

Another 348 (27.4%) teachers indicated they were undecided. Of those who said they were undecided, 37.9% indicated they either almost always or frequently employed this procedural item.

Although the field research indicates the value of this procedural item, a majority of the respondents, 671 (52.8%) indicated they either disagreed or strongly disagreed with the item.

(Item 15, PART III)

The field research on this item indicates that teaching spelling words by the whole method is a better technique than teaching words by syllables.

There were 409 (32.2%) teachers who indicated they utilized the technique of teaching spelling words by the whole method either almost always or frequently.

There were 448 (35.2%) of the respondents who indicated they employed this technique of teaching words by the whole method sometimes, but within this group of teachers 51.6% indicated they either disagreed or strongly disagreed with the procedural Item 17 in PART II.

A total of 414 (32.6%) teachers stated they either almost never or infrequently employed the technique of teaching spelling by the whole method as opposed to the method of learning the words by syllables.

Conclusion: (Number of Respondents = 1,271)

1. In spite of the present field research evidence which indicates learning words by the whole method is a better technique than learning words by syllables, there were 671 (52.8%) teachers out of 1,271 who indicated they either disagreed or strongly disagreed with the procedural item. The majority of these teachers indicated they either almost never or infrequently utilized this procedure in their teaching.

2. There were only 252 (19.8%) teachers who indicated they either strongly agreed or agreed with the procedural item. The majority of these same respondents indicated they either almost always or frequently employed this procedural item in their classes.

(Item 18, PART II) Research Supported

Due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable

and its counterpart

(Item 3, PART III) Research Supported

As an elementary teacher I refrain from having children learn many phonic rules. (See Table 10, Appendix D)

Summary of What the Field Research Indicates

In E. Horn's (1954) study he found it possible to conclude that "the limited success in attempts to teach pupils to learn and apply even a few spelling rules suggest that we should not be too optimistic about the practicability of teaching the more numerous and complicated rules or principles in phonetics (p. 234)."

With greater finality, E. Horn (1957) wrote that, "There seems no escape from the direct teaching of the large number of common words which do not conform in their spelling to any phonetic or orthographic rule (p. 432)."

T. Horn's (1969b) review of spelling research also concur with earlier studies done by E. Horn et al.

Discussion: (Item 18, PART II)

The field research on this procedural item indicates that due to the nature of the English language, most attempts to teach spelling by phonics rules are questionable.

A majority of teachers, 692 (55.0%), who responded to this item disagreed or strongly disagreed with the field research findings. Another 288 (22.9%) teachers indicated they were undecided concerning the procedural item. Yet, 36.8% in this group said they either infrequently or almost never utilized the procedure.

Although the research findings on this item indicate that most attempts to teach spelling by phonics rules are questionable, it is interesting to observe that only 270 (22.2%) teachers, out of a total of 1,259 responding, either

strongly agreed or agreed with the procedural statement.

(Item 3, PART III)

The field research on this item indicates that teachers should refrain from having children learn many phonic rules.

Only 267 (21.2%) teachers out of 1,259 stated they almost always or frequently refrained from having children learn many phonic rules.

There were 403 (32.0%) who stated they sometimes employed this practice, but 50.9% of this group said they either disagreed or strongly disagreed with the procedural item in Item 18, PART II.

Conclusion: (Number of Respondents = 1,259)

1. Although the field research has shown that most attempts to teach spelling by phonic rules are questionable, a majority of teachers in this study--692 (55.0%)--either disagreed or strongly disagreed with the item. The majority of these respondents also indicated they either almost never or infrequently employed this procedure in their classes.

2. Only 279 (22.2%) teachers, out of 1,259 responding to this item, indicated they either strongly agreed or agreed with the procedural statement. The majority of these respondents also indicated they either almost always or frequently utilized this procedure in their classes.

(Item 19, PART II) Research Supported

Time allotted for the study of spelling should be between an hour and seventy-five minutes per week

and its counterpart

(Item 1, PART III) Research Supported

As an elementary teacher I schedule my spelling periods so that the children receive from 60 to 75 minutes per week. (See Table 11, Appendix D)

Summary of What the Field Research Indicates

Larson's (1945) study was done to determine the relationship that exists between the efficiency of spelling instruction and the time allotted to spelling. The conclusions from this study are summed up with the statement that the reduction from 100 minutes to 60 minutes has little adverse effect on achievement.

T. Horn (1946) stated, ". . . time allotted for the study of spelling in excess of 60 minutes a week may be spent more advantageously in other areas (p. 30)."

E. Horn (1960) said, "What is needed is not more time but spirited, efficient use of instructional procedures (p. 1346)." Finally, he warned against the notion that a large time allotment will automatically raise spelling achievement.

Discussion: (Item 19, PART II)

The field research on this procedural item indicates that the time allotted for the study of spelling should be between an hour and seventy-five minutes per week.

There were 336 (26.6%) teachers who indicated they either disagreed or strongly disagreed with the procedural item. Yet of the 302 (23.9%) teachers who disagreed, 73.2% of this group said they either almost always or frequently utilized this procedure. This is also true of the 34 (2.7%) teachers who indicated they strongly disagreed with the item. Fifty-five per cent of this group indicated they either almost always or frequently employed the item.

It is also interesting to observe that of the 189 (14.9%) teachers who indicated they were undecided, 77.2% indicated they either almost always or frequently utilized the procedure.

There was a total of 740 (58.5%) who strongly agreed or agreed with the procedural item and who also indicated they almost always or frequently employed the procedure.

(Item 1, PART III)

The field research on this item indicates that children should receive from 60 to 75 minutes per week for spelling instruction.

The majority of the respondents, 1,083 (85.6%), indicated they almost always or frequently schedule their spelling periods so that their pupils receive between an hour and seventy-five minutes per week.

Only 110 (8.7%) teachers out of 1,265 responding to this item indicated they employed this practice either infrequently or almost never.

Conclusions: (Number of Respondents = 1,265)

1. The present study showed that a majority of teachers, 740 (58.8%), indicated they either strongly agreed or agreed with the procedure of teaching spelling between an hour and seventy-five minutes per week. The vast majority of these respondents claimed they either almost always or frequently employed this procedure in their teaching.

2. There were 302 (23.9%) teachers who indicated they disagreed with the procedural statement. Yet they were inconsistent when they were asked to what degress this procedure is utilized in their classes. Of this group who disagreed, 73.2% said they either almost always or frequently utilized this procedure. This is also true of the 34 (2.7%) teachers who indicated they strongly disagreed. Fifty-five per cent of this group indicated they either almost always or frequently employed this item.

3. This study shows that those teachers who were undecided in this item were inconsistent when asked if they applied this procedure in their classes. For example, of the 189 (14.9%) teachers who indicated they were undecided, 77.2% indicated they either almost always or frequently utilized the procedure.

(Item 20, PART II) Research Supported

The test-study method is superior to the study-test method when working with most spellers

and its counterpart

(Item 11, PART III) Research Supported

As an elementary teacher I administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week. (See Table 12, Appendix D)

Summary of What the Field Research Indicates

Studies done by Hibler (1957) and Montgomery (1957) clearly showed that the test-study method with an immediate correction of the list, was superior to the study-test method.

Walter Petty (1969) stated, ". . . there is an accumulation of research evidence going back about 40 years which shows the value of the pre-test in building positive attitudes in children toward spelling instruction and in resulting high spelling achievement."

Discussion: (Item 20, PART II)

The field research on this procedural item indicates that the test-study method is superior to the study-test method when working with most spellers.

Less than half of the teachers, 526 (41.1%) indicated they either strongly agreed or agreed with the procedural item.

It is of interest to note that of the 398 (31.3%) teachers who claimed they were undecided, 57.2% indicated they utilized this procedure either infrequently or almost never.

A total of 347 (27.3%) respondents disagreed or strongly disagreed with the supported field research statement.

(Item 11, PART III)

The field research on this item indicates that a spelling pre-test should be administered to the children before the majority of them have had an opportunity to study the words for the week.

Table 32 shows that 391 (30.8%) teachers out of 1,271 either almost always or frequently utilized the pre-test before the majority of pupils had an opportunity to study the words for the week.

There were 222 (17.5%) of the respondents who indicated they sometimes utilized this item.

A large group of teachers, 658 (51.8%), stated they either almost never or infrequently administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week.

Conclusions: (Number of Respondents = 1,271)

1. In spite of the research over the past 40 years indicating the value of the test-study-test procedure, there were 347 (27.3%) teachers who claimed they either disagreed or strongly disagreed with the procedural statement. The majority of these teachers claimed they either infrequently or almost never utilized this procedure in their teaching.

2. This study showed that those teachers who were undecided concerning this item, were inconsistent when asked if they applied this procedure in their classes. For example, of the 398 (31.3%) teachers who said they were undecided, 57.2% indicated they utilized this procedure either infrequently or almost never.

(Item 1, PART II) Not Supported by Research

The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation

and its counterpart

(Item 5, PART III) Not Supported by Research

As an elementary teacher I teach spelling words in syllabified form as opposed to the method of undivided word presentation. (See Table 13, Appendix D)

Summary of What the Field Research Indicates

T. Horn's (1947) investigation was undertaken to determine the effect of the visual presentation of words by syllables on learning to spell, and to discover which types of words, if any, benefit from syllabic presentation, and to what degree.

Four conclusions were thought to be warranted from his study. First, there was no advantage in presenting words in syllabified form. Second, no generalized group gives any indication of an advantage to syllabified presentation. Third, no advantage in syllabic presentation was found at either the superior or inferior levels of ability. Fourth, for words which, if syllabified, may cause errors in spelling, there was evidence of a disadvantage if presented in syllabified form.

In T. Horn's (1969b) review of spelling studies he stated that, "The visual presentation of words in syllabified form has not demonstrated any advantage over the undivided method of word presentation, and for some words (e.g., purpose, therefore) there is a negative effect (p. 1289).

Discussion: (Item 1, PART II)

The field research on this procedural item indicates that presenting words by the whole method is a better procedure than the presentation of words in syllabified form. There was a large percentage of teachers, 740 (58.5%) who stated they either strongly agreed or agreed with Item 1, that is, presenting words in syllabified form has proven to have an advantage over the method of whole word presentage.

There were 323 (25.5%) who were undecided concerning the item, but of interest was the fact that 38.1% of this group employed the procedure either infrequently or almost never.

Only 203 (16.0%) of the teachers either disagreed or strongly disagreed with the procedural item.

(Item 5, PART III)

The field research of this item indicates that teaching spelling words by the undivided or whole word method has proven to have an advantage over the method of presenting spelling words in syllabified form.

There was a total of 545 (43.1%) teachers who either almost always or frequently taught spelling words in syllabified form. The majority of these teachers also strongly agreed or agreed with procedural Item 1 of PART II.

Although 416 (32.9%) teachers stated they sometimes utilized this technique there were 55.1% who claimed they either strongly agreed or agreed with the procedural item in PART II.

It is also interesting to note that of the 167 (13.2%) teachers who indicated they infrequently employed this technique, 41.9% of this group said they were undecided concerning the procedural statement while 34.1% said they either disagreed or strongly disagreed with procedural Item 5 in PART II.

Conclusions: (Number of Respondents = 1,266)

1. Seven hundred forty (58.5%) teachers out of 1,266 indicated they either strongly agreed or agreed with the procedural item. That is, the teachers felt that presenting words in syllabified form had an advantage over the method of whole word presentation. These 740 teachers' responses were a direct opposite of what the field research indicates on this particular item. The majority of these teachers indicated they either almost always or frequently utilized these procedures in their teaching.

2. In spite of what research suggests to the teacher, only 203 (16.0%) respondents out of 1,266 said they either disagreed or strongly disagreed with the procedural item. The majority of these same respondents indicated they either almost never or infrequently utilized this item in their teaching.

(Item 2, PART II) Not Supported by Research

A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling

and its counterpart

(Item 7, PART III) Not Supported by Research

As an elementary teacher I stress extrinsic incentives in learning to spell. (See Table 14, Appendix D)

Summary of What the Field Research Indicates

Studies conducted by Columba (1926), Diserens and Vaughn (1931), Forlano (1936), D. Russell (1937), Sand (1938) and E. Horn (1960, 1967) indicated that intrinsic incentives for learning to spell, such as positive attitudes and interest, are preferred to the extrinsic incentives of school grades and competition.

Discussion: (Item 2, PART II)

The field research on this procedural item indicates that intrinsic incentives for learning to spell, such as a child's interest, is preferred to the achievement rewards he might receive in school.

A total of 364 (29.6%) either strongly agreed or agreed with Item 2 as stated in Table 18 even though the field research indicates a child's interest in learning to spell is of primary importance not rewards.

It is of interest to note that of the 202 (16.4%) teachers who claimed they were undecided concerning the procedural item, 31.2% indicated they almost always or frequently utilized it.

This same observation can be made of the two groups of teachers who either disagreed or strongly disagreed with the procedural statement. Of the 486 (39.5%) teachers who disagreed, 28.8% indicated they almost always or frequently employed the item and another 39.3% sometimes utilized it. This also occurred with 179 (14.5%) teachers who strongly disagreed. Thirty-three per cent of them indicated they almost always or frequently employed the procedure and 28.5% stated they sometimes employed it.

(Item 7, PART III)

The field research on this item indicates that the child's interest and attitudes in learning to spell are of primary importance. Rewards or extrinsic incentives that might be received for achievement should be of secondary importance.

There were 401 (32.6%) teachers who either frequently or almost always employed this technique of stressing extrinsic incentives in learning to spell. Of interest is the fact that of those 112 (9.1%) respondents who almost always employed this technique, 45.5% indicated they either disagreed or strongly disagreed with the procedural item. This was also true with those teachers who frequently employed the item. Of the 289 (23.5%) teachers, 51.5% stated they either disagreed with the procedural item.

Of the 467 (37.9%) teachers who sometimes employed Item 7, 51.8% claimed they either disagreed or strongly disagreed with the procedural item in PART II.

Only 363 (29.5% out of 1,231 teachers stated they either almost never or infrequently employed the item.

Conclusions: (Number of Respondents = 1,231)

1. A total of 364 (29.6%) either strongly agreed or agreed with the procedural item even though the field research indicates a child's interest in learning to spell is of primary importance.

2. There was some inconsistency within the undecided category. Of the 202 (16.4%) teachers who claimed they were undecided concerning the procedural item, 31.2% indicated they almost always or frequently utilized this procedure in their classes. This same observation can be made of the two groups of teachers who either disagreed or strongly disagreed with the procedural statement. Of the 486 (39.5%) teachers who disagreed, 28.8% indicated they almost always or frequently employ the item and another 39.3% sometimes utilized it. This also occurred with the 179 (14.5%) teachers who strongly *disagreed*. Thirty-three per cent of this group indicated they either almost always or frequently employed the procedure and another 28.8% stated they sometimes employed it.

(Item 3, PART II) Not Supported by Research

Writing words several times each helps insure spelling retention

and its counterpart

(Item 13, PART III) Not Supported by Research

As an elementary teacher I have children correct misspelled words by writing them several times each. (See Table 15, Appendix D)

Summary of What the Field Research Indicates

The practice of intervening recall has been shown to be beneficial in all fields of learning and the studies done by Abbott (1909) and E. Horn (1967) showed the usefulness of recall for both initial learning and review lessons.

Green and Petty (1968) studies have shown that children should not be required to make repeated writings of words without intervening attempts at recall. The practice of having a child copy a word five times, or ten times, encourages poor habits and attitudes.

Discussion: (Item 3, PART II)

The field research on this procedural item indicates that writing words several times each does not help insure spelling retention. The research studies have shown that the practice of intervening recall of a word is most beneficial for children studying spelling.

Table 15 shows that 597 (46.6%) of the teachers either strongly agreed or agreed that children writing words several times each helps insure their spelling retention. Another 292 (22.8%) of the respondents indicated they were undecided concerning the item. It is interesting to observe that of this group 31.5% either almost always or frequently employed the item, 36.3% utilized the procedure sometimes, and 33.3% employed the item either infrequently or almost never.

A total of 392 (30.6%) out of 1,281 respondents either disagreed or strongly disagreed with procedural Item 3 stated in Table 15.

(Item 13, PART III)

The field research on this item indicates that having children correct misspelled words by writing them several times each is of very little value.

Table 15 shows that 425 (33.2%) teachers either almost always or frequently have children correct misspelled words by writing them several times each.

The table also indicates that of the 419 (32.7%) teachers who sometimes utilized Item 13, 48.7% stated they either strongly agreed or agreed with the procedural item in PART II.

It is of interest to note that of the 198 (15.5%) teachers who infrequently employed the item, 28.8% either strongly agreed or agreed with the procedural statement and another 25.8% said they were undecided.

Out of a total of 1,281 teachers there were 437 (34.2%) who said they either almost never or infrequently employed this technique of correcting misspelled words by writing them several times each.

Conclusions: (Number of Respondents = 1,281)

1. In spite of the field research, this study showed that 597 (46.6%) teachers either strongly agreed or agreed that children who write their spelling words several times each are more likely to remember the spelling of a word. A large percentage of these same teachers indicated they either almost always or frequently utilized this procedure in their classes.

2. Of the 292 (22.8%) teachers who claimed they were undecided concerning the item, 31.5% of them either almost always or frequently employed this procedural technique.

(Item 4, PART II) Not Supported by Research

Using phonic rules, for most words, is a worthwhile instructional procedure

and its counterpart

(Item 18, PART III) Not Supported by Research

As an elementary teacher I have children learn many phonic rules in order to become better spellers. (See Table 16, Appendix D)

Summary of What the Field Research Indicates

In E. Horn's (1954) study he found it possible to conclude that "the limited success in attempts to teach pupils to learn and apply even a few spelling rules suggests that we should not be too optimistic about the practicability of teaching the more numerous and complicated rules or principles in phonetics (p. 234)."

With greater finality, E. Horn (1951) wrote that, "There seems no escape from the direct teaching of the large number of common words which do not conform in their spelling to any phonetic or orthographic rule (p. 432)."

T. Horn's (1969b) review of spelling research also concurs with earlier studies done by E. Horn et al.

Discussion: (Item 4, PART II)

The field research on this procedural item indicates that for most words, using phonic rules in spelling is a questionable instructional procedure. Yet 998 (78.4%) out of 1,278 teachers who responded to this item indicated they strongly agreed or agreed that using phonic rules is a worthwhile instructional procedure.

It is of interest to observe that of the total 147 (11.5%) teachers who indicated they were undecided, 74.2% of this group indicated they employed this procedure either infrequently or almost never.

Only 129 (10.1%) out of 1,274 who responded stated they either disagreed or strongly disagreed with Item 4.

(Item 18, PART III)

The field research on this item indicates that due to the nature of the English language, most attempts to teach spelling by phonic rules are very questionable.

There were 524 (41.1%) teachers who almost never or infrequently utilized the item as stated in Table 16, but a close examination shows that of the 339 (26.6%) teachers who infrequently employed Item 18, 67.8% of them stated they either strongly agreed or agreed with procedural statement 4 in PART II. Only 13.9% of these teachers indicated they either disagreed or strongly disagreed with the procedural item.

This same trend was evident with those teachers who almost never utilized this item. There were 48.1% of these teachers who either strongly agreed or agreed with the procedural statement in PART II.

A third area where this trend was evident was with the 398 (31.2%) teachers who sometimes utilized Item 18. Within this group of teachers, 87.0% indicated they either strongly agreed or agreed with the procedural statement.

Conclusions: (Number of Respondents = 1,274)

1. Even though the field research has shown that for most words, using phonic rules in spelling is a questionable instructional procedure, the majority of respondents 998 (78.4%) in this study indicated they either strongly agreed or agreed that using phonic rules, for most words, is a worthwhile technique. A larger percentage of these same teachers indicated they either almost always or frequently employed this procedure within their classes.

(Item 5, PART II) Not Supported by Research

It is helpful to have children look at "hard spots" in a word to improve spelling ability

and its counterpart

(Item 20, PART III) Not Supported by Research

As an elementary teacher I call the children's attention to "hard spots" in spelling words. (See Table 17, Appendix D)

Summary of What the Field Research Indicates

Tireman (1927) in concluding his study stated, "After a study of over 4,000 pupils in grades four, five, and eight involving a half-million spellings, one is impressed with the consistency with which the data show that marking hard spots is of little or no value (p. 116-177)."

He continued,

> The essential fact in spelling is to write all of the letters and have them in right order. Anything that diverts from this does harm. The fact stands out that the pupils who studied words with the hard spots marked made poorer scores than those who studied lists with the words unmarked. In other words, the people who advocate marking the hard spots are not only suggesting a useless device but possibly a harmful one (p. 117).

The studies of Masters(1927), Mendenhall (1930) and Rosemeier (1965) also concurred with Tireman's (1927) study that calling attention to "hard spots" was of little or no value to the pupil.

Discussion: (Item 5, PART II)

The field research on this procedural item indicates that looking at "hard spots" in a word to improve spelling is of little or no value. Although the field research indicates again little or no value in the procedure, 1,188 (92.6%) out of 1,283 respondents either strongly agreed or agreed with Item 6.

Only a small percentage of teachers, 32 (2.4%) either disagreed or strongly disagreed with the procedural item.

(Item 20, PART III)

The field research on this item indicates that calling the child's attention to "hard spots" in spelling words is of very little value. Yet, 1,106 (86.2%) of the teachers indicated they either almost always or frequently employed this technique.

It is interesting to note that of the 135 (10.5%) teachers who sometimes utilized this technique, 75.5% of this group of teachers either strongly agreed or agreed with the procedural item. Of the total 1,283 teachers responding to this statement there were only 42 (3.3%) teachers who stated they either almost never or infrequently employed the item as stated in Table 17.

Conclusions: (Number of Respondents = 1,283)

1. The field research over the last 40 years, has shown that having children look at or mark "hard spots" in a word is of little or no value. In spite of this fact this study shows that 1,188 (92.6%) of the teachers either strongly agreed or agreed with the procedural item. The vast majority of these same teachers stated they either almost always or frequently utilized the procedural item in their classes.

(Item 7, PART II) Not Supported by Research

For the majority of children, studying spelling words before a pre-test is a highly valuable procedure

and its counterpart

(Item 8, PART III) Not Supported by Research

As an elementary teacher I have the majority of pupils study the spelling words before taking their first weekly spelling test. (See Table 18, Appendix D)

Summary of What the Field Research Indicates

The field research has shown that for the majority of children, studying spelling words before a pre-test is not a highly valuable procedure.

Studies done by Hibler (1957) and Montgomery (1957) clearly showed that the test-study method was superior to the study-test method.

Walter Petty (1969) stated, ". . . there is an accumulation of research evidence going back about 40 years which shows the value of the pre-test in building positive attitudes in children toward spelling instruction and in resulting high achievement."

Discussion: (Item 7, PART II)

The field research on this procedural item indicates that the majority of children should not study their spelling words before a pre-test.

A total of 657 (51.3%) teachers out of 1,281 either strongly agreed or agreed with the procedural item as stated in Table 18. A large percentage of respondents in both categories, indicated they either almost always or frequently employed the item.

There were 234 (18.3%) teachers who stated they were uncertain about the item, but it is of interest to note that 67.1% of this group indicated they either almost always or frequently employed the item.

The same observation is made with the 325 (25.4%) teachers who stated they disagreed. Of this group, 40.3% indicated they either almost always or frequently utilized this item and another 16.6% stated they sometimes employed the procedure.

(Item 8, PART III)

The field research on this item indicates that the majority of pupils should be given a spelling test rather than first studying the words.

On this particular item, 841 (65.7%) of the respondents stated they either almost always or frequently have the majority of their pupils study the words before testing begins.

There were only 291 (22.7%) of the teachers out of 1,281 who either almost never or infrequently utilized Item 8 in their classroom teaching.

Conclusions: (Number of Respondents = 1,281)

1. Although the field research has shown that the majority of children should not study their spelling words before a pre-test, a majority of teachers, in this study, 657 (51.3%) either strongly agreed or agreed with the procedural statement. The majority of these same respondents stated they either almost always or frequently employed this procedure in their classes.

2. There were 234 (18.3%) teachers who stated they were uncertain about the item, but it is of interest to note that 67.1% of this group indicated they either almost always or frequently employed the item.

3. This same observation is made with regard to the 325 (25.4%) teachers who stated they disagreed. Of this group, 40.3% indicated they either almost always or frequently utilized this item and another 16.6% stated they sometimes employed the procedure.

(Item 9, PART II) Not Supported by Research

Time allotment for spelling should vary according to the child's need

and its counterpart

(Item 10, PART III) Not Supported by Research

As an elementary teacher I schedule my spelling periods according to the child's need. (See Table 19, Appendix D)

Summary of What the Field Research Indicates

Larson's (1945) study was done to determine the relationship that exists between the efficiency of spelling instruction and the time allotted to spelling. The conclusions from this study are summed up with the statement that the reduction of time from 100 minutes to 60 minutes has little adverse effect on achievement.

T. Horn (1946) stated ". . . time allotted for the study of spelling in excess of 60 minutes a week may be spent more advantageously in other areas (p. 30)."

E. Horn (1960) said, "What is needed is not more time but spirited, efficient use of instruction procedures (p. 1346)." Finally, he warned against the notion that a large time allotment will automatically raise spelling achievement.

Discussion: (Item 9, PART II)

The field research on this procedural item indicates that time allotted for spelling should be between an hour and seventy-five minutes per week.

(Item 10, PART III)

The field research on this item indicates that spelling periods should be between an hour and seventy-five minutes per week. Although the field research indicates a specific time for the majority of children, there were 595 (66.6%) of the teachers who either almost always or frequently scheduled their spelling

periods according to the child's need.

It is of interest to note that of the 377 (29.5%) teachers who indicated they sometimes utilized this item, 92.6% said they either strongly agreed or agreed with the procedural item.

This is also true of those teachers who either almost never or infrequently utilized this item. Of the 182 (14.3%) who infrequently employed Item 10, 90.1% stated they strongly agreed or agreed with the procedural item. Of the 123 (9.6%) teachers who almost never applied this item, 87.0% indicated they either strongly agreed or agreed with procedural Item 9 of PART II.

Conclusions: (Number of Respondents = 1,277)

1. Although the field research indicates a specific time allotment for the teaching of spelling, this study has shown that the majority of respondents, 1,199 (93.9%), indicated they strongly agreed or agreed with the statement that time allotted for spelling should vary according to the child's need. A large percentage of these respondents either almost always or frequently utilized this procedure.

(Item 12, PART II) Not Supported by Research

Children should devise their own individual method by which they study each word

and its counterpart

(Item 16, PART III) Not Supported by Research

As an elementary teacher I have each child develop his own method by which he learns to spell. (See Table 20, Appendix D)

Summary of What the Field Research Indicates

The field research done by E. Horn (1944, 1954, 1960), Fitzgerald (1951, 1954), and T. Horn (1969b) has shown that there should be a systematic approach whereby children learn to study each word.

Discussion: (Item 12, PART II)

The field research on this procedural item indicates that there should be a systematic approach whereby children learn to study each word. Yet the response from this item indicates that 717 (56.2%) either strongly agreed or agreed in having each child devise his own method of studying a spelling word. Another 298 (23.4%) indicated they were undecided concerning the item, but of this total 49.0% said they sometimes employed the procedure.

Only 260 (20.4%) out of a total 1, 275 respondents either disagreed or strongly disagreed with Item 12.

(Item 16, PART III)

The field research on this item indicates that most children should follow a sequence of steps in learning how to spell words.

Out of a possible 1,275 respondents, 593 (46.6%) stated they employed Item 16, in Table 20, which is not supported by the field research.

It was of interest to note that of the 415 (32.5%) teachers who sometimes utilized Item 16, 47.3% either strongly agreed or agreed with procedural Item 12 in PART II.

Only 167 (20.9%) teachers either almost never or infrequently employed the statement as presented in Table 20.

Conclusions: (Number of Respondents = 1,275)

1. Although for over 25 years the field research on this item has shown that there should be a systematic approach to spelling words, a majority of teachers in this study, 717 (56.2%) indicated they either strongly agreed or agreed in having each child devise his own method of studying spelling words. The majority of respondents indicated they either almost always or frequently utilized this procedural item in their classes.

2. Only 260 (20.4%) teachers out of a total 1,275 indicated they either disagreed or strongly disagreed with the procedural statement. The majority of these respondents indicated they either almost never or infrequently utilized this procedure in their classes.

(Item 13, PART II) Not Supported by Research

Writing words in the air is a valuable means of helping the child practice the spelling of a word

and its counterpart

(Item 14, PART III) Not Supported by Research

As an elementary teacher I have children write spelling words in the air as a means of studying a word. (See Table 21, Appendix D)

Summary of What the Field Research Indicates

Concerning the writing of words in the air, Green and Petty (1968) stated that:

> The practice of writing words in the air is of doubtful value. This practice takes time and does not give the child a realistic image of the word. Supposedly this practice is to give a kinesthetic impression of the word, but the result is questionable, since arm and hand movements are generally not the same as in writing a word. A kinesthetic impression may be useful to a few very poor spellers, but such impression could better be gained through fingertip impression in sand or on the blackboard (p. 332).

Discussion: (Item 13, PART II)

The field research on this procedural item indicates that writing words in the air is of little value.

It is interesting to observe that of the 328 (25.7%) respondents who claimed they agreed with the item, 44.5% of these teachers employed the procedure sometimes and another 30.8% of this group stated they employed the procedure either infrequently or almost never.

Four hundred fifty-nine (35.9%) teachers claimed they were undecided about the item, but a close analysis shows that 77.4% of this group indicated they employed the procedure either infrequently or almost never.

In both groups of teachers who either disagreed or strongly disagreed, Table 21 shows that in each category the majority of teachers indicated they employed this procedure either infrequently or almost never.

(Item 14, PART III)

The field research on this item indicates that there is very little value in having children write spelling words in the air as a means of studying a word.

Only 108 (8.5%) teachers stated they either almost always or frequently have their children write spelling words in the air.

The majority of the respondents, 911 (71.4%) indicated they either almost never or infrequently applied Item 14.

Of the 200 (15.7%) teachers who utilized the technique infrequently, it is of interest to note that 28.0% of this group agreed with the procedural Item 13 of PART II and another 55.0% of this same group stated they were undecided concerning the procedural item.

Conclusions: (Number of Respondents = 1,277)

1. Although 459 (35.9%) teachers stated they were undecided concerning the item, a close analysis in this study showed that 77.4% of this group indicated they employed the procedure either infrequently or almost never.

2. There were 472 (37.0%) teachers who claimed they either disagreed or strongly disagreed with the procedural item. The vast majority of these respondents indicated they either almost never or infrequently utilized this procedural item in their teaching.

3. A total of 346 (27.1%) teachers either strongly agreed or agreed that writing words in the air is a valuable means of helping the child practice the spelling of a word.

(Item 16, PART II) Not Supported By Research

Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation

and its counterpart

(Item 2, PART III) Not Supported by Research

As an elementary teacher I have pupils study their spelling

words in sentence or paragraph form. (See Table 22, Appendix D)

Summary of What the Field Research Indicates

In the study conducted by Hawley and Gallup (1922), they stated that, "If teachers wish to test pupils on the new words of the week, as is advocated by the best authorities, and if they desire to have the spelling word reviewed within the allotted spelling time, they will use the list method (p. 310)."

According to the results of McKee's (1924) study, it appeared that the list format was the most effective way to present spelling words for study.

T. Horn (1952) has stated the crucial question, "When the spelling needs are identified, what is the most efficient method of study? Once again going to the research, our best available evidence, not opinion, favors the list method (p.267)."

E. Horn (1944), McKee (1924) and Winch (1916) all concurred that the presentation of words in context is less efficient than their presentation in list form, except in so far as context is necessary to identify the words in giving a test.

E. Horn (1963) stated that,

> Research has consistently shown that it is more efficient to study words in list than in context. Words studied in lists are learned more quickly, remembered longer, and transferred more readily to new context. Occasional lessons may be justified in which words are presented in context for the purpose of encouraging children to do certain types of writing . . . (p. 16).

Discussion: (Item 16, PART II)

The field research on this procedural item indicates that presenting spelling words in list or column form, initially, is more successful than presenting words in sentence or paragraph form.

A total of 479 (37.6%) of the respondents to this item indicated they strongly agreed or agreed with the statement that presenting spelling words in sentence or paragraph form for the first time, is more successful than the spelling list presentation. Another 408 (32.1%) teachers stated they were undecided but of this group, 49.3% indicated they either almost always or frequently utilized this procedure.

It is also interesting to observe that of the 359 (28.2%) of the teachers who stated they disagreed with the item, 47.4% of this group indicated they almost always or frequently employed the procedure and another 31.2% of these same respondents said they sometimes employed the procedure.

(Item 2, PART II)

The field research on this item indicates that studying spelling words in list form is a better method than studying words in paragraph or sentence form.

Although the field research does not favor having pupils study their spelling words in sentence or paragraph form, there were 735 (57.8%) teachers who stated they either almost always or frequently employed this method.

There were only 176 (13.8%) teachers who either almost never or infrequently employed this technique.

Conclusions: (Number of Respondents = 1,272)

1. In spite of the available research evidence which indicates that presenting spelling words in list or column form, initially, is more successful than presenting words in sentences or paragraph form, a total of 479 (37.6%) teachers stated they either strongly agreed or agreed with the procedural statement. The majority of these respondents claimed they either almost always or frequently utilized this procedure in their classes.

2. Another 408 (32.1%) teachers stated they were undecided, but within this group 49.3% indicated they either almost always or frequently utilized this procedure.

3. There was some inconsistency within the disagreed category. In theory, 359 (28.2%) teachers disagreed with the procedures but in practice, 47.4% of this group of respondents indicated they either almost always or frequently employed the procedure. Another 31.2% of these same teachers said they sometimes employed the procedure.

Educational Implications

On the basis of the findings of this study, the following educational implications seem warranted:

1. An important conclusion from this study, and one having significant implication, is that a serious gap appears to exist between the existing research in spelling and its application in the classroom. Ample evidence of this was revealed in the analysis of the data. For example, spelling research has indicated (Item 14, PART II) that in order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words. For the large majority of students the meaning of the word is already known and to spend additional time on word meaning detracts from spelling ability. In spite of this evidence, this study has shown that a total of 1,007 (79.3%) teachers out of 1,270 indicated they either disagreed or strongly disagreed with the procedural item. A second example can be seen in procedural Item 18, PART II. The field research on this item has shown that due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable. In spite of this evidence, a majority of teachers in this study, 692 (55.0%), indicated they either disagreed or strongly disagreed with the procedural statement. The majority of these respondents also indicated they almost never or infrequently employed this procedure in their classes. It would appear that these responses can be construed as additional evidence of the need for better communication between available field research in spelling and its application by elementary teachers.

2. A majority of the procedural items in PART II of this study were based on field-test research which has been known for over a quarter of a century. But this study has indicated the lack of a universal application of the evidence now available.

Perhaps a major factor for a teacher's failing to know this research and to apply it in the classroom is the fact that many publishers of spelling materials have not made results of the field-tested research available to teachers through their spelling series.

I. Recommendations Applicable to Total Program:

A. It appears that educators can profit by periodically assessing their procedures, practices, and methods. The following suggestions are based upon careful review of research. They should systematically be included in every good spelling program.

1. The words in the spelling program should reflect the known information as to which words are most frequently and likely to be used by students. These words have immediate and permanent value. In most schools this amounts to 3,000-4,000 words. In high ability schools this list might be cut in half with more attention given to the high frequency words with demonstrated persistent difficulties. The easier words will most likely be learned incidentally. Word lists to be consulted are Horn, Rinsland, Fitzgerald, The New Iowa Spelling Scale.

2. Where to place a word in the spelling program is dependent upon a number of factors. First, the child's need of the word; second, the difficulty level of the word with the more difficult words reserved for later in the program; and, third, the phonetic difficulty encountered within the word. There are excellent sources available for analyzing word difficulty by age or grade level (The New Iowa Spelling Scal and the Iowa Tests of Basic Skills).
The developed program of spelling must relate to two major concerns:
   a. Maintenance of spelling ability; and
   b. Growth of spelling ability.
Of the two factors the second is most likely to be overlooked. It would seem worthwhile to select words for study that not only maintain a level of spelling proficiency, but at the same time enlarge the students' ability to spell more words, which implies growth. This may be achieved by carefully insuring that each grade or age level has words that are both maintenance in nature and growth in nature. Too much emphasis on purely a maintenance program would tend to evidence itself in little group or grade growth on standardized achievement or skill tests. A careful balance between maintenance and growth should show spelling improvement on standardized tests. A good discussion of grade placement is found in Horn's NEA publication cited in the bibliography.

3. The self-corrected test procedure has been found to be the single most worthwhile learning activity (per unit of time) yet to be devised. It is clearly appropriate for all ages and abilities.

4. A systematic approach to the study of each word is paramount for good learning. This involves, as stated earlier, pronunciation, visual imagery, reinforcement both orally and written, and systematic recall of words. Frequent opportunity to use spelling words in written words contributes greatly to the maintenance of spelling ability.

5. A good crisp spelling program of between 60-75 minutes per week should be sufficient to both maintain and improve spelling ability.

6. Utilization of a pre-test is a must. The child then studies those words that are shown difficult for him as evidenced by the pre-test.

7. The child's attention should be directed to each word as a total word. Little gain occurs by breaking it into syllables.

8. There are very few rules that will proyide the student with concrete spelling direction. Emphasis must be on teaching the child to learn the ways that words are spelled and not depend upon any one approach or way to spell a speech sound.

9. Schools should systematically and periodically establish inventory lists to measure both group and individual improvement. Each grade

or level ought to establish beginning of year, middle of year, and end of year inventories. Student progress should be thoroughly charted. The emphasis on testing should be directed toward proper testing. The chosen standardized test may or may not be closely related to the spelling instruction program of the school. If the words of your program are totally different from the standardized test, you have no accurate measure of your program's effectiveness. Generally, it is recommended that inventory tests, with class norms, individual norms, and school norms be established within the district or school over the specifically stated spelling program. Standardized tests then give additional information.

The developed testing program ought to answer two questions:

a. How well is our spelling program maintaining spelling ability?
b. How well is our spelling program providing for additional spelling growth?

10. The latest developments relating to linguistically based spelling (Hanna) programs bear watching. From this approach may come fruitful insights into the relationship of sound to letter (phoneme-grapheme) correspondence. At the time of this writing the relationship of linguistic principles to improved spelling is rather tenuous.

B. Pupil interest is crucial to spelling improvement. The development of a positive attitude toward spelling improvement is key to improvement. The replacing of positive attitude by letter grades or competition with others detracts from genuine spelling growth. At the same time recognize that mere pride in spelling alone is no substitute for efficient and meaningful practice periods. But the two aspects, coupled with pupil interest, are bound to result in student gain.

C. Recognize that contemporary spelling programs generally follow one or two approaches. The first approach highlights the use of a pre-determined list of frequently written words and stresses the formation of perceptual images (visually and aurally), along with positive reinforcement, and proper habits of study.

The second approach, generally labeled linguistic, place much more priority on sound and letter associations. In this approach a greater emphasis is placed on phonics and phonetics. The utilization of sound-letter rules is generally recommended. There is a much greater emphasis on grouping words in phonemic families. This approach stresses those words that can be said to exhibit accurate phoneme-grapheme relationships. (See Hanna in bibliography).

While the above two approaches are said to be different, they still embody some common elements such as pre-testing, systematic word study, corrected test, and both visual and auditory discrimination exercises.

D. The role of learning has not been totally established in most spelling programs. In view of this a look at the research shows enough evidence to support the following recommendations:

1. Utilize words that are frequently needed by pupils, thus providing a needed stimulus.
2. Provide proper visual and oral opportunities to see and hear the word
3. Immediate reinforcement of the word through self-correcting is essential.
4. Provide systematic reinforcement of the word; preferably in many different situations.
5. In addition provide meaningful opportunities for systematic recall of the word. Mainly through periodic assessment and functional writing.

6. Accurate spelling ability is most likely the result of "overlearning" which fixes the word image in the pupil's mind.

E. Use of inventory tests are definitely recommended. Preferably during the first or second week of school an inventory test of about fifty words should be given. Its purpose is to discover how well the pupils can spell, before study, the words which make up the lessons for the semester. The words should be systematically sampled from lessons which make up the semester's work. This will give the teacher a good idea of growth occuring during the term. In addition, special programs can thus be inaugurated for both high and low spelling ability students. Also, accurate record keeping allows pupils to see what growth has occurred; a motivational factor in learning to spell. Above all, make sure the child is thorough in his spelling approach. Repeat process for second semester.

F. Constant attention to reviewing those words with known difficulty, obtained through inventory tests, standardized tests, or in consultation with The New Iowa Spelling Scale, will enhance ability. A definite weakness of many spelling programs lies in that they do not systematically reacquaint the students with those words with known difficulties.

G. Oral spelling lessons should not occur very frequently. Spelling ability is defined as the ability to write the word rather than spell it aloud. The neurophysical bonds established by writing and seeing the written word are much more valid than the oral approach.

H. A school's testing program ought to be comprehensive. The program should include teacher made, inventory, and standardized tests. Included should be the development of class, school, and system norms in spelling. These norms should be utilized in helping teachers establish realistic goals for students.

I. It sppears that the incorporation of a student kept record of words most likely to be misspelled is helpful. The pupil keeps a continuous log of words with which he has had difficulty. This serves as a constant reinforcer for directing attention to his own peculiar spelling needs. This practice highlights the development of the student's self responsibility toward spelling growth.

J. Recognize that tremendous variability exists between the popular spelling series available to schools. These differences are due chiefly to the failure of the publishers to insist that available evidence be followed. Some of the more common differences center around the following:
   1. Method of presenting words.
   2. Procedures suggested for word study.
   3. Emphasis upon phonics.
   4. Relationship of spelling to reading and handwriting.
   5. Use of rules for spelling.
   6. Selection of words to be learned.
   7. Grading of words (level or grade).
   8. Indication of word difficulty.
   9. Placement or grouping of words for instruction.
   10. Method of showing spelling growth.
   11. Procedures for diagnosing spelling deficiencies.
   12. Standardized norms for evaluation.
   13. Sensory modes employed (visual, oral, aural, haptic, or kinesthetic).
   14. Quality of teacher manual which accompanies the series.

K. It is worthy to emphasize the relationship between time alloted to spelling and the development of pupil spelling ability. The wise educator will quickly realize that increasing time allotment will not automatically raise spelling achievement. What is needed is to recognize that spirited spelling lessons with efficient recall techniques are the keys to

improved spelling programs. If students are studying words that testing has shown are specific problems for them, improvement is likely. In most situations a weekly spelling allotment of 60-75 minutes is sufficient.

II. Recommendations for Specific Procedures

A. Column or list form

It would appear from the data available within this study that more direct effort should be exerted to present words for study in a column or list form. It is recommended that spelling be taught as spelling and words to be learned presented in list or column fashion.

Teachers appear to be confusing some of the spelling goals with reading goals. The responses to the statement pertaining to teaching the meaning of each spelling word affirms this. It is strongly recommended that teachers be aware of the fact that the meanings of most, if not all, spelling words in the typical spelling program have already been assured through both the child's reading and composition program. Hence, more attention to meaning detracts from the pupil's effort to concentrate on spelling the word.

Clear understanding must be made between the presentation of spelling words and the practice of language in written form. It appears that many educators are under the impression that if the word appears in either sentence or paragraph form that this will lead to better spelling. Research has demonstrated that it is more efficient to present words for study in list or column form. The presenting in list form has the advantage in that it focuses specific attention upon each and every word as a separate problem. On occasion you may wish to get a measure of a child's spelling ability by analyzing how the child spells selected key words which are embedded within a sentence. In this procedure a complete sentence is dictated and the child writes the total sentence. Only the key selected words within the sentence are analyzed for spelling ability. This, however, is entirely different than the objective of how best to present words to children for spelling instruction.

B. Social Utility

School systems are urged to give serious thought to what, and how many, spelling words should be included in the spelling program. It appears that teachers are of the opinion that the inclusion of more words, especially words from various curricular areas, will make the pupil a better speller. No doubt the recent attention to individualized instruction has supported this belief. The fault lies in that many of these additionally selected words are of little value in developing spelling ability because they may not be the words the student is most often called upon to write. This is not to imply that the individual child should not be free to pursue his individualized interest and needs for spelling. It does call attention to the fact that schools would be further ahead if they developed a spelling program around a core of words the pupils were most likely to use or need in the future.

C. "Hard Spots" & Syllabification

1. Schools would do well to re-emphasize the fact that learning to spell a word should involve the child forming a correct visual image of the whole word. The attempt to divide words into parts or syllables has not proven to be a superior technique. Concentrated attack on each whole word as a specific learning problem is recommended. It is extremely important that the pupil learn the ways to spell each sound and not search only for the way to spell a sound. There is no escaping

the fact that a large number of common words do not conform to any generalized phonetic or orthographic rule.

2. There may still continue some indecision as to whether the spelling of a word follows the synthetic or analytic approach. The advocates of the synthesis approach believe better spelling occurs by concentrating on the total word as a specific and individual problem. Research seems to favor the synthetic approach.
   The analytical technique attempts to emphasize the characters (letters) that make up the words. They seek to improve spelling ability by increasing the pupil's awareness of the likenesses and differences of individual letters within the word.
3. Some spelling series have attempted to improve spelling ability by drawing attention to so called "hard spots" within a word. Research has consistently shown this technique to be of little value. Some series color "hard spots" to draw attention of students to it. Again, it is important to realize that children learn words as whole units and not individual parts.

D. Test-Study-Test Format
   1. For the majority of grades in the elementary school the teachers are advised to utilize the test-study-test approach to spelling instruction. Proper testing is aimed at identifying which words are difficult for each child. The pupil's learning should therefore be directed toward those words with which he has demonstrated trouble. The subsequent study period, which concentrates on each child's difficult words, places the focus on learning rather than merely maintaining the correct spelling of words already known to the pupil. This correctly places emphasis on gain in spelling ability by being able to spell words in the future that were spelled incorrectly in the past.

E. Individualization of Spelling
   1. There seems to be contradictory forces operating when the topic of individualized spelling arises. On the whole it appears that teachers are highly in favor of having each child develop his own particular approach to spelling each word. In reality the best procedure is the spelling program which provides the child with a systematic approach (steps) to spelling improvement. Schools would be well advised to incorporate the research efforts into a deliberate and systematic instructional program. As such, the following is recommended:
      a. First, having the pupil get a correct visual-aural impression of the word by seeing the word while it is pronounced correctly.
      b. With eyes closed have each child try to see the specific word. Have the child pronounce it and then try to recall how the word looked in the book.
      c. Open your eyes and look at the word to see if you spelled it correctly.
      d. Focus attention upon the word with attention again given to pronouncing it correctly.
      e. Again close your eyes to see the word as you attempt to spell it aloud.
      f. Look again in the book to see if you had the word spelled correctly.
      g. You may wish to write the word a couple of times, each time covering the previous spelling, so as you don't copy from the first spelling. If you don't make any mistakes, go on to the next word following

the same procedure. Be careful that you follow the procedure step by step.

It is recommended that a procedure such as described above be utilized for each child regardless of ability in every classroom.

2. Helping students who appear to be low in spelling ability deserves special recognition. Immediate and careful remediation of the problem is imperative. It is best to first isolate the cause for low spelling ability. In general, this seems most likely to be lack of interest, poor proofreading skills, little writing ability, no direction concerning what words are in need of additional study, dawdling, no method of attacking a word, or improper use of the self-correction technique. In some cases the cause may be due to organic deficiencies (sight, hearing, motor ability). It is recommended that the low spelling ability student stress the steps outlined earlier in the above recommendation. In some cases splitting the week's spelling list into two or three sub-lists might aid by making the week's work more manageable for the student.

F. Self-Correction

1. There is a great deal of uncertainty by teachers as to the value of the self-corrected test procedure. It is strongly recommended that schools develop a clear perception of what the corrected test procedure is, and furthermore actively seek to implement the technique within the spelling program. It is clearly evident that teachers, in general, are unaware of the value of the corrected test procedure in spelling improvement. A good source for reference is Thomas Horn's MA Thesis at the University of Iowa (Cited in bibliography).

The self-correction technique does several things for the student. It provides him with an immediate opportunity to see what words cause him difficulty. It also allows him to see the part of the word that caused him difficulty. In addition, he can immediately set about to correct any errors he may have made. In last analysis, the procedure calls the student's attention to how critical his own perceptions concerning self improvement are to the learning process.

G. Rote and Air Writing

1. Educators should place less reliance on the old method of having the child write each word several times in hopes that this will cement the word in his mind. In effect what this does is encourage poor habits and attitudes. The teacher should place much more emphasis on systematic recall of the words. The emphasis within the study period should be directed toward recalling the visual image of the word rather than merely impressing this image through repeated writing of the word.
2. The practice of having children practice by writing words in the air is highly suspect. Its greatest danger lies in the fact that it does not allow the child to form a realistic image of the word as does writing it on paper. At the same time be careful to insure that the writing of the word on paper is meaningful to the pupil and not merely perfunctory. This same criticism is also applied to the practice of having the child spell orally.

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APPENDIX A

The Survey Instrument
Distribution of Items PART II
Distribution of Items PART III
Comparative Items: PART II & III

Dear Educator:

I am seeking your assistance in a project designed to assess the attitudes of a random sample of Iowa elementary teachers with respect to general spelling practices. In order for this study to be accurate, it is important that you complete each item within the questionnaire. Would you kindly take a few minutes from your busy schedule to complete this form and return it to your principal so that he can mail it to me by May 8.

No reference will be made to you, your school, or your school system. The sample is designed to yield state norms for Iowa.

The success of this study is contingent upon your cooperation. I need and appreciate your help. Thank you.

Note: Numbers in parentheses next to each statement are for key-punch purposes. Please disregard them.

PART I

General Information

Please place a mark (X) in front of the response which best describes you or your situation.

Please answer each item

1. Which *one* of the following statements do you most closely adhere to: (11)

   _____ 1. According to my educational philosophy, I believe that a teacher should decide upon a best instructional procedure for teaching spelling and adhere to it.

   _____ 2. According to my educational philosophy, I believe that it is best to utilize a variety of instructional procedures in teaching spelling.

2. Age (12)

   _____ 1. 20-29 _____ 3. 40 - 49 _____ 5. 60 - 69
   _____ 2. 30-39 _____ 4. 50 - 59

3. Please indicate number of years as an elementary teacher (13)

   _____ 1. 0 - 4 _____ 4. 15 - 19 _____ 6. 25 - 29
   _____ 2. 5 - 9 _____ 5. 20 - 24 _____ 7. 30 or more years
   _____ 3. 10 - 14

4. Please indicate at which grade you teach. (14)

   _____ 1. grade 2 _____ 3. grade 4 _____ 5. grade 6
   _____ 2. grade 3 _____ 4. grade 5

5. Please indicate the number of years since you last registered for a language arts course. (15)

   _____ 1. 0 - 2 years ago _____ 3. 6 - 8 years ago
   _____ 2. 3 - 5 years ago _____ 4. 9 years or more

Please answer each item.

6. How often is spelling scheduled per week? (16)

_____ 1. Daily
_____ 2. Twice weekly
_____ 3. Three times weekly
_____ 4. Four times weekly

7. How many minutes per week are devoted to spelling instruction? (17)

_____ 1. 30 - 44
_____ 2. 45 - 59
_____ 3. 60 - 75
_____ 4. 76 - 100
_____ 5. 101 - 115
_____ 6. 116 - 130
_____ 7. 131 minutes or more

8. Please mark the following subjects in terms of importance within the total school program. Assign each subject a number from 1 to 10 with no duplicates. Rank number 1 as most important and number 10 as least important. (18-19)

_____ Art
_____ Grammar
_____ Handwriting
_____ Mathematics
_____ Music
_____ Physical Education
_____ Reading
_____ Science
_____ Social Studies
_____ Spelling

PART II

Directions: This survey is designed to elicit your attitudes on a number of spelling issues. Kindly indicate how you feel about each of the items in this survey. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your attitude according to the following scale: 1 – Strongly Agree; 2 – Agree; 3 – Undecided; 4 – Disagree; 5 – Strongly Disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
1. The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation	1	2	3	4	5	(21)
2. A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling	1	2	3	4	5	(22)
3. Writing words several times each helps insure spelling retention	1	2	3	4	5	(23)
4. Using phonic rules, for most words, is a worthwhile instructional procedure	1	2	3	4	5	(24)
5. It is helpful to have children look at "hard spots" in a word to improve spelling ability	1	2	3	4	5	(25)
6. Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form	1	2	3	4	5	(26)
7. For the majority of children, studying spelling words before a pre-test is a highly valuable procedure	1	2	3	4	5	(27)

Please answer each item

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
8.	The spelling words of highest-frequency in child and adult writing should be studied by elementary school children	1	2	3	4	5	(28)
9.	Time allotment for spelling should vary according to the child's need	1	2	3	4	5	(29)
10.	The major contribution of spelling games is the stimulation of pupil interest	1	2	3	4	5	(30)
11.	The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell	1	2	3	4	5	(31)
12.	Children should devise their own individual method by which they study each word	1	2	3	4	5	(32)
13.	Writing words in the air is a valuable means of helping the child practice the spelling of a word	1	2	3	4	5	(33)
14.	In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words	1	2	3	4	5	(34)
15.	Spelling lists derived from the various curricular areas are of little value in increasing spelling ability	1	2	3	4	5	(35)
16.	Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation	1	2	3	4	5	(36)
17.	Learning words by the whole method is a better technique than learning words by syllables	1	2	3	4	5	(37)
18.	Due to the nature of the English language, most attempts to teaching spelling by phonic rules are questionable	1	2	3	4	5	(38)
19.	Time allotted for the study of spelling should be between an hour and seventy-five minutes per week	1	2	3	4	5	(39)
20.	The test-study method is superior to the study-test method when working with most spellers	1	2	3	4	5	(40)

PART III

Directions: Kindly indicate how you feel about each of the items below. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your teaching according to the following scale:

1 – Almost Always (A spelling practice with a *very* high degree of regularity)
2 – Frequently (A spelling practice repeated with *some* degree of regularity)

Please answer each item

3 Sometimes (A spelling practice used *on occasion*)
4 Infrequently (A spelling practice *seldom* used)
5 Almost Never (A spelling practice *very seldom* used)

AS AN ELEMENTARY TEACHER I:

		Almost Always	Frequently	Sometimes	Infrequently	Almost Never	
1.	. . . schedule my spelling periods so that the children receive from 60 to 75 minutes per week	1	2	3	4	5	(41)
2.	. . . have pupils study their spelling words in sentence or paragraph form	1	2	3	4	5	(42)
3.	. . . refrain from having children learn many phonic rules	1	2	3	4	5	(43)
4.	. . . have each child correct his own spelling test	1	2	3	4	5	(44)
5.	. . . teach spelling words in syllabified form as opposed to the method of undivided word presentation	1	2	3	4	5	(45)
6.	. . . refrain from teaching the meanings of most weekly spelling words	1	2	3	4	5	(46)
7.	. . . stress extrinsic incentives in learning to spell	1	2	3	4	5	(47)
8.	. . . have the majority of pupils study the spelling words before taking their first weekly spelling test	1	2	3	4	5	(48)
9.	. . . have pupils study their spelling words in a list or column form	1	2	3	4	5	(49)
10.	. . . schedule my spelling periods according to the child's need	1	2	3	4	5	(50)
11.	. . . administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week	1	2	3	4	5	(51)
12.	. . . refrain from using spelling words derived from other curricular areas	1	2	3	4	5	(52)
13.	. . . have children correct misspelled words by writing them several times each	1	2	3	4	5	(53)
14.	. . . have children write spelling words in the air as a means of studying a word	1	2	3	4	5	(54)
15.	. . . teach the spelling words by the whole method as opposed to the method of learning words by syllables	1	2	3	4	5	(55)
16.	. . . have each child develop his own method by which he learns to spell	1	2	3	4	5	(56)
17.	. . . use spelling games to supplement direct instruction in learning to spell	1	2	3	4	5	(57)
18.	. . . have children learn many phonic rules in order to become better spellers	1	2	3	4	5	(58)
19.	. . . teach the words of greatest-frequency in child and adult writing	1	2	3	4	5	(59)
20.	. . . call the children's attention to "hard spots" in spelling words	1	2	3	4	5	(60)

Distribution of Items in PART II

PART II Research-Supported Procedural Items	PART II Not Supported by Research Procedural Items
6	1
8	2
10	3
11	4
14	5
15	7
17	9
18	12
19	13
20	16

Distribution of Items in Pa[illegible] III

PART III Research-Supported Application Items	PART III Not Supported by Research Application Items
1	2
3	5
4	7
6	8
9	10
11	13
12	14
15	16
17	18
19	20

Comparative Items (Procedural) PART II and

(Application) PART III of Research Instrument

PART II Procedural Items	PART III Application Items
6	9
8	19
10	17
11	4
14	6
15	12
17	15
18	3
19	1
20	11
1	5
2	7
3	13
4	18
5	20
7	8
9	10
12	16
13	14
16	2

Note: As exhibited each of the items in PART II has a counterpart in PART III. For example, Item 6 of PART II is related to Item 9 of PART III.

APPENDIX B

ABSTRACT

The purpose of this study was to find the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six were aware of supported and non-supported research procedures in spelling. In addition the study was designed to ascertain the degree to which this representative sample of teachers were utilizing or not utilizing selected research procedures in teaching spelling to their pupils.

The specific problems in this study were: (1) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six agree or disagree with research-supported procedures in spelling, (2) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize research-supported procedures in spelling, (3) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six agree or disagree with procedures in spelling which are not supported by research, (4) To ascertain the degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize or do not utilize procedures in spelling which are not supported by research.

The data were secured through a mailed attitudinal questionnaire designed by the writers. The survey was completed in the spring of 1970. From the 1,472 teachers reached by the mailed survey, 1,289 or 88 per cent were completed and returned.

Since this investigation was concerned with the degree as well as the existence of a relationship between the teachers' attitude toward procedural statements and the application of these procedural statements in the classroom, the statistic employed was "Kendall's Tau (+) with ties." This rank-order correlation method was utilized because both variables under consideration were ordinal.

The null form (i.e., there is no monotonic relationship) of the research hypothesis was tested using a one-tailed test at the .05 level of significance.

The following major conclusions regarding the procedural and application items can be formulated on the basis of this study:

A. The field research has shown that presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form.
   1. In spite of the present research, this study indicated that 518 (40.6%) either disagreed or strongly disagreed with the procedural statement. A large percentage of these respondents indicated they either almost never or infrequently utilized this procedure in their classes.

B. The field research has shown that the spelling words of highest frequency in child and adult writing should be studied by elementary school children.
   1. The majority of respondents, 1,175 (91.9%), indicated they were in agreement with the field research on this particular item. The vast majority of the 1,175 teachers also stated they either almost always or frequently utilized this procedure.

C. The field research has shown that the major contribution of spelling games is the stimulation of pupil interest.
   1. A total of 1,028 (90.3%) teachers in this study indicated they concur with the procedural statement. That is, they are in agreement with the field research results. The majority of these respondents stated they either almost always or frequently utilized this procedure in their classes.
   2. There were several inconsistencies which indicated a lack of monotonic relationship between the theory and practice statements. It is of interest to note that of the 130 (10.1%) teachers who disagreed with the item, 43.8% indicated they either almost always or frequently employed this procedure in their classrooms. Of the 863 (67.4%) teachers who indicated they agreed with the procedural item, 42.8% of this group stated they sometimes employed this practice. Another 17.2% indicated they either almost never or infrequently employed this technique in their classes.

D. The field research has shown that the child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell.
   1. This study showed a total of 538 (42.7%) teachers indicated they either disagreed or strongly disagreed with the procedural item. A large percentage of these respondents indicated they either almost never or infrequently utilized this procedure in their classes.

   2. Only 401 (31.8%) of the 1,262 respondents indicated they strongly agreed or agreed with the procedural statement. The majority of this group of teachers indicated they either almost always or frequently utilized this procedure in their teaching.

E. The field research has shown that in order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words.

   1. This study has clearly shown that a total of 1,007 (79.3%) teachers indicated they either disagreed or strongly disagreed with this statement. The majority of these same teachers indicated they either almost never or infrequently employed this procedure in their classrooms.

F. The field research has shown that spelling lists derived from the various curricular areas are of little value in increasing spelling ability.

   1. In spite of field research, a total of 1,083 (85.1%) teachers indicated they either disagreed or strongly disagreed with this procedural item. The majority of these teachers indicated they either almost never or infrequently utilized this procedure in their classes.

G. The field research has shown that learning words by the whole method is a better technique than learning words by syllables.
   1. In spite of the present research evidence which indicates learning words by the whole method is a better technique than learning words by syllables, there were 671 (52.8%) teachers who indicated they either disagreed or strongly disagreed with the procedural item. The majority of these teachers also indicated they either

almost never or infrequently utilized this procedure in their classes.

H. The field research has shown that due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable.
   1. A majority of teachers in this study, 692 (55.0%) indicated they either disagreed or strongly disagreed with the item. The majority of these respondents also indicated they almost never or infrequently employed this procedure in their classes.

I. The field research has shown that time allotted for the study of spelling should be between an hour and seventy-five minutes per week.
   1. This study showed that a majority of teachers, 740 (58.5%), indicated they either strongly agreed or agreed with the procedure of teaching spelling between an hour and seventy-five minutes per week. The majority of these teachers indicated they either almost always or frequently utilized this procedure in their teaching.

J. The field research has shown that the test-study method is superior to the study-test method when working with most spellers.
   1. In spite of the research over the past 40 years indicating the value of the test-study procedure, there were 347 (27.3%) teachers who claimed they either disagreed or strongly disagreed with the procedural statement. The majority of these teachers claimed they either infrequently or almost never utilized this procedure in their teaching.
   2. This study showed that those teachers who were undecided concerning this item, were inconsistent when asked if they applied this procedure in their classroom. For example, of the 398 (31.3%) teachers who said they were undecided, 57.2% indicated they utilized the procedure either infrequently or almost never.

K. The field research has shown that the presentation of words in syllabified form has not proven to have an advantage over the method of whole word presentation.
   1. Seven hundred forty (58.5%) teachers out of 1,266 indicated they either strongly agreed or agreed with the procedural statement. That is, the teachers felt that presenting words in syllabified form had an advantage over the method of whole word presentation. The majority of these teachers indicated they either almost always or frequently utilized these procedures in their teaching.
   2. In spite of what research suggests to the teacher, only 203 (16.0%) respondents out of 1,266 said they either disagreed or strongly disagreed with the procedural item. The majority of these same respondents indicated they either almost never or infrequently utilize this procedural item in their teaching.

L. The field research has shown that having the child write words several times each is of little or no value in helping insure spelling retention.
   1. In spite of the field research, this study showed that 597 (46.6%) teachers either strongly agreed or agreed that children who write their spelling words several times each are more likely to remember the spelling of a word. A large percentage of these same teachers indicated they either almost always or frequently utilized this procedure in their classes.

M. The field research has shown that having children look at "hard spots" in a word to improve spelling is of little or no value.

1. The field research over the last 40 years has indicated that having children look at or mark "hard spots" in a word is of little or no value. In spite of this fact this study shows that 1,188 (92.6%) of the respondents either strongly agreed or agreed that the teaching of "hard spots" in a word is helpful in improving spelling ability. The vast majority of these same teachers stated they either almost always or frequently utilized this technique in their teaching.

APPENDIX C

Research-Supported Procedures in Spelling

Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form.

Winch (1916)
Hawley and Gallup (1922)
McKee (1924)
E. Horn (1944, 1954, 1963)
Strickland (1951)

The spelling words of highest frequency in child and adult writing should be studied by elementary school children.

Thorndike (1921)
E. Horn (1924, 1926, 1939, 1960)
Hollingsworth (1965)
T. Horn (1969b)

The major contribution of spelling games is the stimulation of pupil interest.

Fitzgerald (1951)
E. Horn (1960)
T. Horn (1969b)

The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell.

T. Horn (1946)
Louis (1950)
Beseler (1953)
Tyson (1953)
Thomas (1954)
Schoephoerster (1962)
E. Horn (1963)
Christine and Hollingsworth (1966)

In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words.

E. Horn (1960)
Petty (1968)
T. Horn (1969b)

Spelling lists derived from the various curricular areas are of little value in increasing spelling ability.

E. Horn (1919, 1926, 1960)
Fitzgerald (1951, 1953)
T. Horn (1969b)

Learning words by the whole method is a better technique than learning words by syllables.

T. Horn (1947, 1969b)
Humphry (1954)

Due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable.

E. Horn (1919, 1954, 1957, 1960, 1963)
Archer (1930b)
Sartorius (1931)
King (1932)
Foran (1934)
Fitzgerald (1951)
Jackson (1953)
T. Horn (1969a, 1969b)

Time allotted for the study of spelling should be between an hour and seventy-five minutes per week.

Larson (1945)
T. Horn (1947)
E. Horn (1960)

The test-study method is superior to the study-test method when working with most spellers.

Kingsley (1923)
Gates (1931)
Blanchard (1944)
T. Horn (1946)
Edwards (1951)
Shubik (1951)
Fitzgerald (1953)
Hibler (1957)
Montgomery (1957)
Witty (1969)

Procedures in Spelling Not Supported by Research

The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation.

T. Horn (1947, 1969b)
Humphry (1954)

A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling.

Columba (1926)
Diserens and Vaughn (1931)
Thorndike (1935)
Forlano (1936)
D. Russell (1937)
Sand (1938)
E. Horn (1960, 1967)

Writing words several times each helps insure spelling retention.

Abbott (1909
E. Horn (1967)
Green (1968)
Petty (1968)

Using phonic rules, for most words, is a worthwhile instructional procedure.

E. Horn (1919, 1954, 1957, 1960, 1963)
Archer (1930b)
Sartorius (1931)
King (1932)
Foran (1934)
Fitzgerald (1951)
Jackson (1953)
T. Horn (1969a, 1969b)

It is helpful to have children look at "hard spots" in a word to improve spelling ability.

Tireman (1927)
Masters (1927)
Mendenhall (1930)
Rosemeier (1965)

For the majority of children, studying spelling words before a pre-test is a highly valuable procedure.

Kingsley (1923)
Gates (1931)
Blanchard (1944)

T. Horn (1946, 1969b)
Fitzgerald (1951)
Hibler (1957)
Witty (1969)

Time allotment for spelling should vary according to the child's need.

Larson (1945)
T. Horn (1947)

Children should devise their own individual method by which they study each word.

E. Horn (1944, 1954, 1960)
Fitzgerald (1951, 1954)
T. Horn (1969b)

Writing words in the air is a valuable means of helping the child practice the spelling of a word.

Green (1968)
Petty (1968)

Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation.

Winch (1916)
Hawley and Gallup (1922)
McKee (1924)
E. Horn (1944, 1954, 1963)
Strickland (1951)

PART III

The 20 items PART III were developed by the writers. Each of the statements in this part was intended to ascertain the degree which this sample of Iowa elementary teachers utilized or did not utilize the research-supported and not-supported research statements in PART II. In other words, each of the 20 items in PART II has a counterpart in the 20 application items in PART III.

A five-point Likert (1967) scale was employed to evaluate each attitude statement in PART III. The respondents indicated their attitudes by circling one of five points on the scale ranging from "Almost Always," "Frequently," "Sometimes," "Infrequently," to "Almost Never."

The 20 items in PART III were divided into two categories: (1) The degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize or do not utilize research supported procedures in spelling; (2) The degree to which a representative sample of Iowa elementary teachers teaching in grades two through six utilize or do not utilize procedures in spelling which are not supported by research.

Listed below are the 20 items in PART II of the questionnaire with the 20 counterpart items in PART III. Located under the 20 pairs of items are the names of the researchers and the dates of their studies which substantiate the statement

Research-Supported Procedures In Spelling PART II	Application Supported By Research PART III
Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form.	As an elementary teacher I have pupils study their spelling words in a list or column form.
Winch (1916) Hawley and Gallup (1922) McKee (1924) E. Horn (1944, 1954, 1963) Strickland (1951)	
The spelling words of highest frequency in child and adult writing should be studied by elementary school children	As an elementary teacher I teach the words of greatest-frequency in child and adult writing.
Thorndike (1921) E. Horn (1924, 1926, 1939, 1960) Hollingsworth (1965) T. Horn (1969b)	
The major contribution of spelling games is the stimulation of pupil interest.	As an elementary teacher I use spelling games to supplement direct instruction in learning to spell.
Fitzgerald (1951) E. Horn (1960) T. Horn (1969b)	
The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell.	As an elementary teacher I have each child correct his own spelling test.
T. Horn (1946) Louis (1950) Beseler (1953) Tyson (1953) Thomas (1954) Schoephoerster (1962) E. Horn (1963) Christine and Hollingsworth (1966)	

In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words. E. Horn (1960) Petty (1968) T. Horn (1969b)	As an elementary teacher I refrain from teaching the meanings of most weekly spelling words.
Spelling lists derived from the various curricular areas are of little value in increasing spelling ability. E. Horn (1919, 1926, 1960) Fitzgerald (1951, 1953) T. Horn (1969b)	As an elementary teacher I refrain from using spelling words derived from other curricular areas.
Learning words by the whole method is a better technique than learning words by syllables. T. Horn (1947, 1969b) Humphry (1954)	As an elementary teacher I teach the spelling words by the whole method as opposed to the method of learning words by syllables.
Due to the nature of the English language, most attempts to teach spelling by the phonic rules are questionable. E. Horn (1919, 1954, 1957, 1960, 1963) Archer (1930b) Sartorius (1931) King (1932) Foran (1934) Fitzgerald (1951) Jackson (1953) T. Horn (1969a, 1969b)	As an elementary teacher I refrain from having children learn many phonic rules.
Time allotted for the study of spelling should be between an hour and seventy-five minutes per week. Larson (1945) T. Horn (1947) E. Horn (1960)	As an elementary teacher I schedule my spelling periods so that the children receive from 60 to 75 minutes per week.
The test-study method is superior to the study-test method when working with most spellers. Kingsley (1923) Gates (1931) Blanchard (1944) T. Horn (1946) Edwards (1951) Shubik (1951) Fitzgerald (1953) Hibler (1957)	As an elementary teacher I administer a spelling pretest before the majority of pupils have had an opportunity to study the words for the week.

Montgomery (1957)
Witty (1969)

Procedures in Spelling Not Supported By Research PART II	Application Not Supported By Research PART III
The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation. T. Horn (1947, 1969b) Humphry (1954)	As an elementary teacher I teach spelling words in syllabified form as opposed to the method of undivided word presentation.
A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling. Columba (1926) Diserens and Vaughn (1931) Thorndike (1935) Forlano (1936) D. Russell (1937) Sand (1938) E. Horn (1960, 1967)	As an elementary teacher I stress extrinsic incentives in learning to spell.
Writing words several times each helps insure spelling retention. Abbott (1909) E. Horn (1967) Green (1968) Petty (1968)	As an elementary teacher I have children correct misspelled words by writing them several times each.
Using phonic rules, for most words, is a worthwhile instructional procedure. E. Horn (1919, 1954, 1957, 1960, 1963) Archer (1930b) Sartorius (1931) King (1932) Foran (1934) Fitzgerald (1951)	As an elementary teacher I have children learn many phonic rules in order to become better spellers.
It is helpful to have children look at "hard spots" in a word to improve spelling ability. Tireman (1927) Masters (1927) Mendenhall (1930) Rosemeier (1965)	As an elementary teacher I call the children's attention to "hard spots" in spelling words.

For the majority of children, studying spelling words before a pretest is a highly valuable procedure. Kingsley (1923) Gates (1931) Blanchard (1944) T. Horn (1946, 1969b) Fitzgerald (1951) Hibler (1957) Witty (1969)	As an elementary teacher I have the majority of pupils study the spelling words before taking their first weekly spelling test.
Time allotment for spelling should vary according to the child's need. Larson (1945) T. Horn (1947)	As an elementary teacher I schedule my spelling periods according to the child's need.
Children should devise their own individual method by which they study each word. E. Horn (1944, 1954, 1960) Fitzgerald (1951, 1954) Hildreth (1954) T. Horn (1969)	As an elementary teacher I have each child develop his own method by which he learns to spell.
Writing words in the air is a valuable means of helping the child practice the spelling of a word. Green (1968) Petty (1968)	As an elementary teacher I have children write spelling words in the air as a means of studying a word.
Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation. Winch (1916) Hawley and Gallup (1922) McKee (1924) E. Horn (1944, 1954, 1963) Strickland (1951)	As an elementary teacher I have pupils study their spelling words in sentence or paragraph form.

APPENDIX D

Comparative Analysis of Tables

TABLE 3

Comparison Between

Distribution of Responses to Statement:
Presenting Spelling Words in List Form, Initially, Is a
More Successful Method Than Presenting Spelling
Words in Sentences or Paragraph Form
(Item 6, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	53.6	39.1	24.1	13.8	13.2	
Frequently	26.8	34.8	34.6	22.7	13.2	
Sometimes	16.1	17.8	26.3	33.0	24.2	
Infrequently	0.0	5.5	9.6	13.8	20.9	
Almost Never	3.6	2.9	5.4	16.6	28.6	
Totals	N = 56 % = 4.4	348 27.3	353 27.7	427 33.5	91 7.1	1,275

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have Pupils Study
Their Spelling Words in a List or Column Form
(Item 9, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N=1,275 N	%
Almost Always	9.3	42.2	26.4	18.3	3.7	322	25.3
Frequently	4.1	33.0	33.2	26.4	3.3	367	28.8
Sometimes	2.8	19.0	28.4	43.1	6.7	327	25.6
Infrequently	0.0	14.5	26.0	45.0	14.5	131	10.3
Almost Never	1.6	7.8	14.8	55.5	20.3	128	10.0

General Interpretation of Table 3: (Item 6, PART II)

Of the 1,275 teachers who responded to this item, 56 (4.4%) strongly agreed; 348 (27.3%) agreed; 353 (27.7%) were undecided; 427 (33.5%) disagreed; and 91 (7.1%) strongly disagreed.

Of the 56 teachers who strongly agreed, 53.6% almost always use the technique; 26.8% frequently use the technique; 16.1% sometimes use the technique; 0.0% infrequently use the technique and 3.6% almost never use the technique.

The top half of the tables in this section can be interpreted in a similar manner.

General Interpretation of Table 3: (Item 9, PART III)

Of the 1,275 teachers who responded to this item, 322 (25.3%, almost always used this technique, 367 (28.8%) frequently employed the technique, 327 (25.6%) sometimes utilized this item, 131 (10.3%) infrequently employed this practice, 128 (10.0%) almost never used this practice.

Of the 322 (25.3%) who almost always used this technique, 9.3% strongly agreed with procedural Item 6 in PART II, 42.2% agreed, 26.4% were undecided, 18.3% disagreed, and 3.7% strongly disagreed.

The bottom half of the tables in this section can be interpreted in a similar manner.

TABLE 4

Comparison Between

Distribution of Responses to Statement:
The Spelling Words of Highest-Frequency in Child
And Adult Writing Should Be Studied
By Elementary School Children
(Item 8, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	46 0	24.7	6.8	3.8	33.3	
Frequently	40.2	47.8	41.9	19.2	0.0	
Sometimes	10.9	21.8	31.1	23.1	0.0	
Infrequently	1.9	4.4	17.6	30.8	33.3	
Almost Never	1.0	1.3	2.7	23.1	33.3	
Totals	N = 478	697	74	26	3	1,278
	% 37.4	54.5	5.8	2.0	0.2	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Teach the Words
Of Greatest-Frequency in Child and Adult Writing
(Item 19, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N=1,278 N	%
Almost Always	55.1	43.1	1.3	0.3	0.3	399	31.2
Frequently	34.2	59.4	5.5	0.9	0.0	561	43.9
Sometimes	22.3	65.2	9.9	2.6	0.0	233	18.2
Infrequently	14.5	50.0	21.0	12.9	1.6	62	4.9
Almost Never	21.7	39.1	8.7	26.1	4.3	23	1.8

TABLE 5

Comparison Between

Distribution of Responses to Statement:
The Major Contribution of Spelling Games Is
The Stimulation of Pupil Interest
(Item 10, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	20.6	7.2	2.5	6.9	0.0	
Frequently	42.4	32.9	25.0	36.9	33.3	
Sometimes	26.7	42.8	41.7	34.6	0.0	
Infrequently	7.9	12.1	22.5	14.6	66.7	
Almost Never	2.4	5.1	8.3	6.9	0.0	
Totals	N = 165 % = 12.9	863 67.4	120 9.4	130 10.1	3 0.2	1,281

and

Distribution of Responses to Statement:
As an Elementary Teacher I Use Spelling Games
To Supplement Direct Instruction in Learning to Spell
(Item 17, PART III) Research Supported

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Totals N = 1,281	
Almost Always	31.5	57.4	2.8	8.3	0.0	108	8.4
Frequently	16.2	65.6	6.9	11.1	0.2	433	33.8
Sometimes	8.7	72.6	9.8	8.9	0.0	508	39.7
Infrequently	7.9	63.0	16.4	11.5	1.2	165	12.9
Almost Never	6.0	65.7	14.9	13.4	0.0	67	5.2

TABLE 6

Comparison Between

Distribution of Responses to Statement:
The Child Correcting His Own Spelling Test, Under the Direction of the Teacher, Is The Single Most Important Factor in Learning to Spell
(Item 11, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	34.9	22.6	6.5	8.2	2.0	
Frequently	28.9	28.3	22.6	15.6	30.0	
Sometimes	22.9	27.0	34.7	31.6	28.0	
Infrequently	3.6	7.9	17.3	12.5	4.0	
Almost Never	9.6	14.2	18.9	32.2	36.0	
N =	83	318	323	488	50	1,262
Totals % =	6.6	25.2	25.6	38.7	4.0	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have Each Child Correct His Own Spelling Test
(Item 4, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,262 N	%
Almost Always	17.8	44.2	12.9	24.5	0.6	163	12.9
Frequently	8.6	32.4	26.3	27.3	5.4	278	22.0
Sometimes	4.9	22.3	29.1	40.0	3.6	385	30.5
Infrequently	2.0	17.0	38.1	41.5	1.4	147	11.6
Almost Never	2.8	15.6	21.1	54.3	6.2	289	22.9

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TABLE 7

Comparison Between

Distribution of Responses to Statement:
In Order to Learn to Spell, It is Not Necessary
For Children to Learn the Meaning of the
Majority of Their Spelling Words
(Item 14, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	4.3	4.8	0.0	1.2	0.9	
Frequently	0.0	6.8	8.5	2.5	0.9	
Sometimes	4.3	18.5	17.0	13.5	4.9	
Infrequently	21.7	28.1	34.0	24.9	14.2	
Almost Never	69.6	41.8	40.4	58.0	79.0	
Totals N =	23	146	94	683	324	1,270
Totals % =	1.8	11.5	7.4	53.8	25.5	

and

Distribution of Responses to Statement:
As an Elementary Teacher I refrain from Teaching
The Meanings of Most Weekly Spelling Words
(Item 6, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,270 N	%
Almost Always	5.3	36.8	0.0	42.1	15.8	19	1.5
Frequently	0.0	26.3	21.1	44.7	7.9	38	3.0
Sometimes	0.7	17.8	10.5	60.5	10.5	152	12.0
Infrequently	1.7	13.9	10.9	57.8	15.6	294	23.1
Almost Never	2.1	8.0	5.0	51.6	33.4	767	60.4

TABLE 8

Comparison Between

Distribution of Responses to Statement:
Spelling Lists Derived from the Various
Curricular Areas Are of Little Value
In Increasing Spelling Ability
(Item 15, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided	Disagree %	Strongly Disagree %	
Almost Always	10.0	15.9	6.0	2.6	2.2	
Frequently	20.0	7.9	6.8	6.1	3.2	
Sometimes	20.0	30.2	38.5	18.2	16.5	
Infrequently	10.0	23.8	26.5	34.5	27.6	
Almost Never	40.0	22.2	22.2	38.7	50.5	
N =	10	63	117	804	279	1,273
Totals %	0.8	4.9	9.2	63.2	21.9	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Refrain From Using
Spelling Words Derived From Other Curricular Areas
(Item 12, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,273 N	%
Almost Always	2.2	22.2	15.6	46.7	13.3	45	3.5
Frequently	2.7	6.8	11.0	67.1	12.3	73	5.7
Sometimes	0.8	7.4	17.4	56.6	17.8	258	20.3
Infrequently	0.2	3.7	7.7	69.1	19.2	401	31.5
Almost Never	0.8	2.8	5.2	62.7	28.4	496	39.0

TABLE 9

Comparison Between

Distribution of Responses to Statement:
Learning Words by the Whole Method Is a Better
Technique Than Learning Words by Syllables
(Item 17, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	63.6	42.6	13.8	4.3	3.0	
Frequently	13.6	35.2	24.1	8.6	1.5	
Sometimes	13.6	18.7	49.1	36.8	13.4	
Infrequently	0.0	2.2	9.5	27.6	23.9	
Almost Never	9.1	1.3	3.4	22.7	58.2	
N =	22	230	348	604	67	1,271
Totals % =	1.7	18.1	27.4	47.5	5.3	

and

Distribution of Responses to Statement:
As an Elementary Teacher I teach the Spelling Words
By the Whole Method As Opposed to the Method
Of Learning Words by Syllables
(Item 15, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,271 N	%
Almost Always	7.4	52.1	25.5	13.8	1.1	188	14.8
Frequently	1.4	36.7	38.0	23.5	0.5	221	17.4
Sometimes	0.7	9.6	38.2	49.6	2.0	448	35.2
Infrequently	0.0	2.3	14.9	75.6	7.2	221	17.4
Almost Never	1.0	1.6	6.2	71.0	20.2	193	15.2

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TABLE 10

Comparison Between

Distribution of Responses to Statement:
Due to the Nature of the English Language, Most Attempts
To Teach Spelling by Phonic Rules Are Questionable
(Item 18, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Disagree %	
Almost Always	21.1	13.[illegible]	4.5	3.6	4.3	
Frequently	36.8	29.6	18.8	8.2	0.0	
Sometimes	31.6	29.6	39.9	30.8	13.0	
Infrequently	0.0	18.5	22.6	30.8	21.7	
Almost Never	10.5	9.2	14.2	26.6	60.9	
Totals N =	19	260	288	645	46	1,259
Totals % =	1.5	20.7	22.9	51.3	3.7	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Refrain from
Having Children Learn Many Phonic Rules
(Item 3, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,259 N	%
Almost Always	5.3	44.7	[illegible].1	30.3	2.6	76	6.0
Frequently	3.7	40.3	28.3	27.7	0.0	191	15.2
Sometimes	1.5	19.1	28.5	49.[illegible]	1.5	403	32.0
Infrequently	0.0	14.9	20.2	61.8	3.1	322	25.6
Almost Never	0.7	9.0	15.4	64.4	10.5	267	21.2

TABLE 11

Comparison Between

Distribution of Responses to Statement:
Time Allotted for the Study of Spelling Should Be Between
An Hour and Seventy-Five Minutes Per Week
(Item 19, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	88.5	81.3	56.6	60.3	52.9	
Frequently	4.6	13.0	20.6	12.9	2.9	
Sometimes	2.3	3.1	11.6	8.3	8.8	
Infrequently	2.3	1.1	7.4	5.6	5.9	
Almost Never	2.3	1.5	3.7	12.9	29.4	
Totals N =	87	653	189	302	34	1,265
Totals % =	6.9	51.6	14.9	23.9	2.7	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Schedule My Spelling
Periods So That the Children Receive
From 60 to 75 Minutes Per Week
(Item 1, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,265 N	%
Almost Always	8.4	58.0	11.7	19.9	2.0	915	73.3
Frequently	2.4	50.6	23.2	23.2	0.6	168	13.3
Sometimes	2.8	27.8	30.6	34.7	4.2	72	5.7
Infrequently	4.8	16.7	33.3	40.5	4.8	42	3.3
Almost Never	2.9	14.7	10.3	57.4	14.7	68	5.4

TABLE 12

Comparison Between

Distribution of Responses to Statement:
The Test-Study Method Is Superior to the Study-Test Method When Working With Most Spellers
(Item 20, PART II) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	48.1	30.8	9.8	4.4	7.4	
Frequently	13.5	20.3	11.3	5.3	0.0	
Sometimes	19.2	18.1	21.6	10.9	18.5	
Infrequently	5.8	13.3	18.3	23.1	11.1	
Almost Never	13.5	17.5	38.9	56.3	63.0	
Totals N =	52	474	398	320	27	1,271
Totals % =	4.1	37.3	31.3	25.2	2.1	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Administer a Spelling Pre-Test Before the Majority of Pupils Have Had an Opportunity To Study the Words for the Week
(Item 11, PART III) Research Supported

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,271 N	%
Almost Always	11.1	64.6	17.3	6.2	0.9	226	17.8
Frequently	4.2	58.2	27.3	10.3	0.0	165	13.0
Sometimes	4.5	38.7	38.7	15.8	2.3	222	17.5
Infrequently	1.4	29.2	33.8	34.3	1.4	216	17.0
Almost Never	1.6	18.8	35.1	40.7	3.8	442	34.8

TABLE 13

Comparison Between

Distribution of Responses to Statement:
The Presentation of Words in Syllabified Form Has
Proven to Have an Advantage Over the Method
Of Whole Word Presentation
(Item 1, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	36.5	16.9	3.1	1.1	5.6	
Frequently	38.4	39.2	18.6	8.1	5.6	
Sometimes	21.0	35.1	40.2	29.7	11.1	
Infrequently	2.7	6.5	21.7	28.6	22.2	
Almost Never	1.4	2.3	16.4	32.4	55.6	
Totals	N = 219 % = 17.3	521 41.2	323 25.5	185 14.6	18 1.4	1,266

and

Distribution of Responses to Statement:
As an Elementary Teacher I teach Spelling Words
In Syllabified Form As Opposed to the Method
Of Undivided Word Presentation
(Item 5, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,266 N	%
Almost Always	44.2	48.6	5.5	1.1	0.6	181	14.3
Frequently	23.1	56.0	16.5	4.1	0.3	364	28.8
Sometimes	11.1	44.0	31.3	13.2	0.5	416	32.9
Infrequently	3.6	20.4	41.9	31.7	2.4	167	13.2
Almost Never	2.2	8.7	38.4	43.5	7.2	138	10.9

TABLE 14

Comparison Between

Distribution of Responses to Statement:
A Child's Interest in Learning to Spell is Secondary to
Rewards He Might Receive for Achievement in Spelling
(Item 2, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	26.6	8.3	9.4	7.6	7.8	
Frequently	20.3	27.7	21.8	21.2	25.7	
Sometimes	26.6	39.3	44.6	39.3	28.5	
Infrequently	10.9	12.3	13.9	16.9	14.0	
Almost Never	15.6	12.3	10.4	13.0	24.0	
Totals	N = 64 % = 5.2	300 24	202 16.4	486 39.5	179 14.5	1,231

and

Distribution of Responses to Statement:
As an Elementary Teacher I Stress Extrinsic
Incentives In Learning to Spell
(Item 7, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,231 %	
Almost Always	15.2	22.3	17.0	33.0	12.5	112	9.1
Frequently	4.5	28.7	15.2	35.6	15.9	289	23.5
Sometimes	3.6	25.3	19.3	40.9	10.9	467	37.9
Infrequently	3.7	19.6	14.8	48.7	13.2	189	15.4
Almost Never	5.7	21.3	12.1	36.2	24.7	174	14.1

TABLE 15

Comparison Between

Distribution of Responses to Statement:
Writing Words Several Times Each Helps
Insure Spelling Retention
(Item 3, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	40.8	16.7	9.6	2.6	2.3	
Frequently	23.9	29.5	20.9	11.5	2.3	
Sometimes	21.1	35.9	26.3	30.3	19.3	
Infrequently	5.6	10.1	17.5	25.0	15.9	
Almost Never	8.5	7.8	15.8	30.6	60.2	
Totals N =	71	526	292	304	88	1,281
Totals % =	5.5	41.1	22.8	23.7	6.9	

and

Distribution of Responses to Statement:
As an Elementary Teacher I have Children Correct
Misspelled Words by Writing Them Several Times Each
(Item 13, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,281 N	%
Almost Always	18.7	56.8	18.1	5.2	1.3	155	12.1
Frequently	6.3	57.4	22.6	13.0	0.7	270	21.1
Sometimes	3.6	45.1	25.3	22.0	4.1	419	32.7
Infrequently	2.0	26.8	25.8	38.4	7.1	198	15.5
Almost Never	2.5	17.2	19.2	38.9	22.2	239	18.7

TABLE 16

Comparison Between

Distribution of Responses to Statement:
Using Phonic Rules, for Most Words, Is a
Worthwhile Instructional Procedure
(Item 4, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	19.4	4.6	0.7	0.0	0.0	
Frequently	31.0	22.8	6.8	4.3	23.1	
Sometimes	32.2	35.5	18.4	19.8	15.4	
Infrequently	12.0	26.9	42.2	39.7	7.7	
Almost Never	5.4	10.1	32.0	36.2	53.8	
Totals	N = 258 % = 20.3	740 58.1	147 11.5	116 9.1	13 1.0	1,274

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have Children
Learn Many Phonic Rules in Order
To Become Better Spellers
(Item 18, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,274 N	%
Almost Always	58.8	40.0	1.2	0.0	0.0	85	6.7
Frequently	30.0	63.3	3.7	1.9	1.1	267	21.0
Sometimes	20.9	66.1	6.8	5.8	0.5	398	31.2
Infrequently	9.1	58.7	18.3	13.6	0.3	339	26.6
Almost Never	7.6	40.5	25.4	22.7	3.8	185	14.5

TABLE 17

Comparison Between

Distribution of Responses to Statement:
It Is Helpful to Have Children Look at "Hard Spots"
In a Word to Improve Spelling Ability
(Item 5, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	78.0	44.8	11.1	4.0	14.3	
Frequently	18.0	42.3	28.6	28.0	0.0	
Sometimes	3.6	11.4	42.9	20.0	14.3	
Infrequently	0.0	0.9	15.9	20.0	14.3	
Almost Never	0.5	0.7	1.6	28.0	57.1	
Totals	N = 422 % = 32.9	766 59.7	63 4.9	25 1.9	7 0.5	1,283

and

Distribution of Responses to Statement:
As an Elementary Teacher I Call the Children's
Attention to "Hard Spots" in Spelling Words
(Item 20, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,283 N	%
Almost Always	48.3	50.4	1.0	0.1	0.1	681	53.1
Frequently	17.9	76.2	4.2	1.6	0.0	425	33.1
Sometimes	11.1	64.4	20.0	3.7	0.7	135	10.5
Infrequently	0.0	30.4	43.5	21.7	4.3	23	1.8
Almost Never	10.5	26.3	5.3	36.8	21.1	19	1.5

TABLE 18

Comparison Between

Distribution of Responses to Statement:
For the Majority of Children, Studying Spelling Words
Before a Pre-Test Is a Highly Valuable Procedure
(Item 7, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	75.6	61.5	44.0	23.1	12.3	
Frequently	11.8	20.0	23.1	17.2	3.1	
Sometimes	4.7	9.2	14.1	16.6	10.8	
Infrequently	1.6	4.7	9.0	15.4	9.2	
Almost Never	6.3	4.5	9.8	27.7	64.6	
Totals	N = 127	530	234	325	65	1,281
	% = 9.9	41.4	18.3	25.4	5.1	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have the Majority
Of Pupils Study the Spelling Words Before
Taking Their First Weekly Spelling Test
(Item 8, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,281 N	%
Almost Always	15.8	53.6	16.9	12.3	1.3	608	47.5
Frequently	6.4	45.5	23.2	24.0	0.9	233	18.2
Sometimes	4.0	32.9	22.1	36.2	4.7	149	11.6
Infrequently	1.9	24.0	20.2	48.1	5.8	104	8.1
Almost Never	4.3	12.8	12.3	48.1	22.5	187	14.6

TABLE 19

Comparison Between

Distribution of Responses to Statement:
Time Allotment for Spelling Should Vary
According to the Child's Need
(Item 9, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	24.7	12.5	0.0	3.4	0.0	
Frequently	33.3	31.6	18.4	20.7	0.0	
Sometimes	23.3	31.6	30.6	44.8	0.0	
Infrequently	10.8	14.9	28.6	13.8	0.0	
Almost Never	7.8	9.4	22.4	17.2	0.0	
Totals	N = 360 % = 28.2	839 65.7	49 3.8	29 2.3	0 0.0	1,277

and

Distribution of Responses to Statement:
As an Elementary Teacher I Schedule My Spelling
Periods According to the Child's Need
(Item 10, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,277 N	%
Almost Always	45.6	53.8	0.0	0.5	0.0	195	15.3
Frequently	30.0	66.2	2.2	1.5	0.0	400	31.3
Sometimes	22.3	70.3	4.0	3.4	0.0	377	29.5
Infrequently	21.4	68.7	7.7	2.2	0.0	182	14.3
Almost Never	22.8	64.2	8.9	4.1	0.0	123	9.6

TABLE 20

Comparison Between

Distribution of Responses to Statement:
Children Should Devise Their Own Individual
Method by Which They Study Each Word
(Item 12, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	60.7	19.6	6.0	1.7	0.0	
Frequently	28.6	43.4	26.2	7.1	9.1	
Sometimes	10.7	29.5	49.0	29.4	13.6	
Infrequently	0.0	5.8	12.8	37.0	13.6	
Almost Never	0.0	1.6	6.0	24.8	63.6	
Totals N =	84	633	298	238	22	1,275
Totals % =	6.6	49.6	23.4	18.7	1.7	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have Each Child Develop
His Own Method by Which He Learns to Spell
(Item 16, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,275 N	%
Almost Always	25.9	62.9	9.1	2.0	0.0	197	15.5
Frequently	6.1	69.4	19.7	4.3	0.5	396	31.1
Sometimes	2.2	45.1	35.2	16.9	0.7	415	32.5
Infrequently	0.0	22.3	22.9	53.0	1.8	166	13.0
Almost Never	0.0	9.9	17.8	58.4	13.9	101	7.9

TABLE 21

Comparison Between

Distribution of Responses to Statement:
Writing Words in the Air Is a Valuable Means of Helping
The Child Practice the Spelling of a Word
(Item 13, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree	
Almost Always	38.9	2.1	0.2	0.0	0.0	
Frequently	16.7	22.6	2.8	0.7	0.0	
Sometimes	33.3	44.5	19.6	3.9	0.0	
Infrequently	5.6	17.1	24.0	8.0	0.0	
Almost Never	5.6	13.7	53.4	87.3	100.0	
N =	18	328	459	411	61	1,277
Totals % =	1.4	25.7	35.9	32.2	4.8	

and

Distribution of Responses to Statement:
As an Elementary Teacher I have Children
Write Spelling Words in the Air as
A Means of Studying a Word
(Item 14, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,277 N	%
Almost Always	46.7	46.7	6.7	0.0	0.0	15	1.2
Frequently	3.2	79.6	14.0	3.2	0.0	93	7.3
Sometimes	2.3	56.6	34.9	6.2	0.0	258	20.2
Infrequently	0.5	28.0	55.0	16.5	0.0	200	15.7
Almost Never	0.1	6.3	34.5	50.5	8.6	711	55.7

TABLE 22

Comparison Between

Distribution of Responses to Statement:
Presenting Spelling Words in Sentence Or Paragraph
Form, for the First Time, Is More Successful
Than the Spelling List Presentation
(Item 16, PART II) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	
Almost Always	49.4	30.1	16.2	19.8	26.9	
Frequently	33.3	40.8	33.1	27.6	26.9	
Sometimes	12.6	22.7	35.5	31.2	15.4	
Infrequently	3.4	5.1	8.3	12.0	11.5	
Almost Never	1.1	1.3	6.9	9.5	19.2	
Totals N =	87	392	408	359	26	1,272
Totals % =	6.8	30.8	32.1	28.2	2.0	

and

Distribution of Responses to Statement:
As an Elementary Teacher I Have Pupils Study Their
Spelling Words in Sentence or Paragraph Form
(Item 2, PART III) Not Supported by Research

	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Totals N = 1,272 N	%
Almost Always	14.1	38.7	21.6	23.3	2.3	305	24.0
Frequently	6.7	37.2	31.4	23.0	1.6	430	33.8
Sometimes	3.0	24.7	40.2	31.0	1.1	361	28.4
Infrequently	2.9	19.4	33.0	41.7	2.9	103	8.1
Almost Never	1.4	6.8	38.4	46.6	6.8	73	5.7

APPENDIX E

Pre-Test and Post-Test Instruments

Fitzsimmons Instrument

Fitzsimmons, Robert J., "A Study of the Attitudes of a Representative Population of Iowa Elementary Teachers Toward Spelling Theory and Practice"

Unpublished Ph.D. dissertation, University of Iowa, 1971

PRE-TEST AND POST-TEST INSTRUMENT

Dear Educator:

I am seeking your assistance in a project designed to assess the attitudes of a random sample of Iowa elementary teachers with respect to general spelling practices. In order for this study to be accurate, it is important that you complete each item within the questionnaire. Would you kindly take a few minutes from your busy schedule to complete this form and return it to your principal so that he can mail it to me by May 8.

No reference will be made to you, your school, or your school system. The sample is designed to yield state norms for Iowa.

The success of this study is contingent upon your cooperation. I need and appreciate your help. Thank you.

Note: Numbers in parentheses next to each statement are for key-punch purposes. Please disregard them.

PART I

General Information

Please place a mark (X) in front of the response which best describes you or your situation.

Please answer each item.

1. Which *one* of the following statements do you most closely adhere to: (11)

   _____ 1. According to my educational philosophy, I believe that a teacher should decide upon a best instructional procedure for teaching spelling and adhere to it.

   _____ 2. According to my educational philosophy, I believe that it is best to utilize a variety of instructional procedures in teaching spelling.

2. Age (12)

   _____ 1. 20-29 _____ 3. 40 - 49 _____ 5. 60 - 69
   _____ 2. 30-39 _____ 4. 50 - 59

3. Please indicate number of years as an elementary teacher. (13)

   _____ 1. 0 - 4 _____ 4. 15 - 19 _____ 6. 25 - 29
   _____ 2. 5 - 9 _____ 5. 20 - 24 _____ 7. 30 or more years
   _____ 3. 10 - 14

4. Please indicate at which grade you teach. (14)

   _____ 1. grade 2 _____ 3. grade 4 _____ 5. grade 6
   _____ 2. grade 3 _____ 4. grade 5

5. Please indicate the number of years since you last registered for a language arts course. (15)

   _____ 1. 0 - 2 years ago _____ 3. 6 - 8 years ago
   _____ 2. 3 - 5 years ago _____ 4. 9 years or more

Please answer each item

6. How often is spelling scheduled per week? (16)

_____ 1. Daily
_____ 2. Twice weekly
_____ 3. Three times weekly
_____ 4. Four times weekly

7. How many minutes per week are devoted to spelling instruction? (17)

_____ 1. 30 - 44
_____ 2. 45 - 59
_____ 3. 60 - 75
_____ 4. 76 - 100
_____ 5. 101 - 115
_____ 6. 116 - 130
_____ 7. 131 minutes or more

8. Please mark the following subjects in terms of importance within the total school program. Assign each subject a number from 1 to 10 with no duplicates. Rank number 1 as most important and number 10 as least important. (18-19)

_____ Art
_____ Grammar
_____ Handwriting
_____ Mathematics
_____ Music
_____ Physical Education
_____ Reading
_____ Science
_____ Social Studies
_____ Spelling

PART II

Directions: This survey is designed to elicit your attitudes on a number of spelling issues. Kindly indicate how you feel about each of the items in this survey. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your attitude according to the following scale: 1 – Strongly Agree; 2 – Agree; 3 – Undecided; 4 – Disagree; 5 – Strongly Disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
1. The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation	1	2	3	4	5	(21)
2. A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling	1	2	3	4	5	(22)
3. Writing words several times each helps insure spelling retention	1	2	3	4	5	(23)
4. Using phonic rules, for most words, is a worthwhile instructional procedure	1	2	3	4	5	(24)
5. It is helpful to have children look at "hard spots" in a word to improve spelling ability	1	2	3	4	5	(25)
6. Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form	1	2	3	4	5	(26)
7. For the majority of children, studying spelling words before a pre-test is a highly valuable procedure	1	2	3	4	5	(27)

Please answer each item

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
8.	The spelling words of highest-frequency in child and adult writing should be studied by elementary school children	1	2	3	4	5	(28)
9.	Time allotment for spelling should vary according to the child's need	1	2	3	4	5	(29)
10.	The major contribution of spelling games is the stimulation of pupil interest	1	2	3	4	5	(30)
11.	The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell	1	2	3	4	5	(31)
12.	Children should devise their own individual method by which they study each word	1	2	3	4	5	(32)
13.	Writing words in the air is a valuable means of helping the child practice the spelling of a word	1	2	3	4	5	(33)
14.	In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words	1	2	3	4	5	(34)
15.	Spelling lists derived from the various curricular areas are of little value in increasing spelling ability	1	2	3	4	5	(35)
16.	Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation	1	2	3	4	5	(36)
17.	Learning words by the whole method is a better technique than learning words by syllables	1	2	3	4	5	(37)
18.	Due to the nature of the English language, most attempts to teaching spelling by phonic rules are questionable	1	2	3	4	5	(38)
19.	Time allotted for the study of spelling should be between an hour and seventy-five minutes per week	1	2	3	4	5	(39)
20.	The test-study method is superior to the study-test method when working with most spellers	1	2	3	4	5	(40)

PART III

Directions: Kindly indicate how you feel about each of the items below. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your teaching according to the following scale:

1 Almost Always (A spelling practice with a *very* high degree of regularity)
2 Frequently (A spelling practice repeated with *some* degree of regularity)

3 Sometimes (A spelling practice used *on occasion*)
4 Infrequently (A spelling practice *seldom* used)
5 Almost Never (A spelling practice *very seldom* used)

Please answer each item

AS AN ELEMENTARY TEACHER I:	Almost Always	Frequently	Sometimes	Infrequently	Almost Never	
1. . . . schedule my spelling periods so that the children receive from 60 to 75 minutes per week	1	2	3	4	5	(41)
2. . . . have pupils study their spelling words in sentence or paragraph form	1	2	3	4	5	(42)
3. . . . refrain from having children learn many phonic rules	1	2	3	4	5	(43)
4. . . . have each child correct his own spelling test	1	2	3	4	5	(44)
5. . . . teach spelling words in syllabified form as opposed to the method of undivided word presentation	1	2	3	4	5	(45)
6. . . . refrain from teaching the meanings of most weekly spelling words	1	2	3	4	5	(46)
7. . . . stress extrinsic incentives in learning to spell	1	2	3	4	5	(47)
8. . . . have the majority of pupils study the spelling words before taking their first weekly spelling test	1	2	3	4	5	(48)
9. . . . have pupils study their spelling words in a list or column form	1	2	3	4	5	(49)
10. . . . schedule my spelling periods according to the child's need	1	2	3	4	5	(50)
11. . . . administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week	1	2	3	4	5	(51)
12. . . . refrain from using spelling words derived from other curricular areas	1	2	3	4	5	(52)
13. . . . have children correct misspelled words by writing them several times each	1	2	3	4	5	(53)
14. . . . have children write spelling words in the air as a means of studying a word	1	2	3	4	5	(54)
15. . . . teach the spelling words by the whole method as opposed to the method of learning words by syllables	1	2	3	4	5	(55)
16. . . . have each child develop his own method by which he learns to spell	1	2	3	4	5	(56)
17. . . . use spelling games to supplement direct instruction in learning to spell	1	2	3	4	5	(57)
18. . . . have children learn many phonic rules in order to become better spellers	1	2	3	4	5	(58)
19. . . . teach the words of greatest frequency in child and adult writing	1	2	3	4	5	(59)
20. . . . call the children's attention to "hard spots" in spelling words	1	2	3	4	5	(60)

PRE-TEST AND POST-TEST INSTRUMENT WITH RESEARCH SUPPORTED RESPONSES INDICATED

Dear Educator:

I am seeking your assistance in a project designed to assess the attitudes of a random sample of Iowa elementary teachers with respect to general spelling practices. In order for this study to be accurate, it is important that you complete each item within the questionnaire. Would you kindly take a few minutes from your busy schedule to complete this form and return it to your principal so that he can mail it to me by May 8.

No reference will be made to you, your school, or your school system. The sample is designed to yield state norms for Iowa.

The success of this study is contingent upon your cooperation. I need and appreciate your help. Thank you.

Note: Numbers in parentheses next to each statement are for key-punch purposes. Please disregard them.

PART I

General Information

Please place a mark (X) in front of the response which best describes you or your situation.

Please answer each item

1. Which *one* of the following statements do you most closely adhere to: (11)

   _____ 1. According to my educational philosophy, I believe that a teacher should decide upon a best instructional procedure for teaching spelling and adhere to it.

   _____ 2. According to my educational philosophy, I believe that it is best to utilize a variety of instructional procedures in teaching spelling.

2. Age (12)

   _____ 1. 20-29 _____ 3. 40 - 49 _____ 5. 60 - 69
   _____ 2. 30-39 _____ 4. 50 - 59

3. Please indicate number of years as an elementary teacher. (13)

   _____ 1. 0 - 4 _____ 4. 15 - 19 _____ 6. 25 - 29
   _____ 2. 5 - 9 _____ 5. 20 - 24 _____ 7. 30 or more years
   _____ 3. 10 - 14

4. Please indicate at which grade you teach. (14)

   _____ 1. grade 2 _____ 3. grade 4 _____ 5. grade 6
   _____ 2. grade 3 _____ 4. grade 5

5. Please indicate the number of years since you last registered for a language arts course. (15)

   _____ 1 0 - 2 years ago _____ 3. 6 - 8 years ago
   _____ 2. 3 - 5 years ago _____ 4. 9 years or more

Please answer each item

6. How often is spelling scheduled per week? (16)

_____ 1. Daily
_____ 2. Twice weekly
_____ 3. Three times weekly
_____ 4. Four times weekly

7. How many minutes per week are devoted to spelling instruction? (17)

_____ 1. 30 - 44
_____ 2. 45 - 59
_____ 3. 60 - 75
_____ 4. 76 - 100
_____ 5. 101 - 115
_____ 6. 116 - 130
_____ 7. 131 minutes or more

8. Please mark the following subjects in terms of importance within the total school program. Assign each subject a number from 1 to 10 with no duplicates. Rank number 1 as most important and number 10 as least important. (18-19)

_____ Art
_____ Grammar
_____ Handwriting
_____ Mathematics
_____ Music
_____ Physical Education
_____ Reading
_____ Science
_____ Social Studies
_____ Spelling

PART II

Directions: This survey is designed to elicit your attitudes on a number of spelling issues. Kindly indicate how you feel about each of the items in this survey. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your attitude according to the following scale: 1 – Strongly Agree; 2 – Agree; 3 – Undecided; 4 – Disagree; 5 – Strongly Disagree.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
1.	The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation	1	2	3	4	(5)	(21)
2.	A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling	1	2	3	4	(5)	(22)
3.	Writing words several times each helps insure spelling retention	1	2	3	4	(5)	(23)
4.	Using phonic rules, for most words, is a worthwhile instructional procedure	1	2	3	4	(5)	(24)
5.	It is helpful to have children look at "hard spots" in a word to improve spelling ability	1	2	3	4	(5)	(25)
6.	Presenting spelling words in list form, initially, is a more successful method than presenting spelling words in sentences or paragraph form	(1)	2	3	4	5	(26)
7.	For the majority of children, studying spelling words before a pre-test is a highly valuable procedure	1	2	3	4	(5)	(27)

Please answer each item

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
8.	The spelling words of highest-frequency in child and adult writing should be studied by elementary school children	(1)	2	3	4	5	(28)
9.	Time allotment for spelling should vary according to the child's need	1	2	3	4	(5)	(29)
10.	The major contribution of spelling games is the stimulation of pupil interest	(1)	2	3	4	5	(30)
11.	The child correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell	(1)	2	3	4	5	(31)
12.	Children should devise their own individual method by which they study each word	1	2	3	4	(5)	(32)
13.	Writing words in the air is a valuable means of helping the child practice the spelling of a word	1	2	3	4	(5)	(33)
14.	In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words	(1)	2	3	4	5	(34)
15.	Spelling lists derived from the various curricular areas are of little value in increasing spelling ability	(1)	2	3	4	5	(35)
16.	Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation	1	2	3	4	(5)	(36)
17.	Learning words by the whole method is a better technique than learning words by syllables	(1)	2	3	4	5	(37)
18.	Due to the nature of the English language, most attempts to teaching spelling by phonic rules are questionable	(1)	2	3	4	5	(38)
19.	Time allotted for the study of spelling should be between an hour and seventy-five minutes per week	(1)	2	3	4	5	(39)
20.	The test-study method is superior to the study-test method when working with most spellers	(1)	2	3	4	5	(40)

PART III

Directions: Kindly indicate how you feel about each of the items below. It is important that you *answer each item* for this instrument to be valid.

Circle the corresponding number which reflects your teaching according to the following scale:

1 Almost Always (A spelling practice with a *very* high degree of regularity)
2 – Frequently (A spelling practice repeated with *some* degree of regularity)

Please answer each item

3 – Sometimes (A spelling practice used *on occasion*)
4 – Infrequently (A spelling practice *seldom* used)
5 – Almost Never (A spelling practice *very seldom* used)

AS AN ELEMENTARY TEACHER I:

		Almost Always	Frequently	Sometimes	Infrequently	Almost Never	
1.	. . . schedule my spelling periods so that the children receive from 60 to 75 minutes per week.	(1)	2	3	4	5	(41)
2.	. . . have pupils study their spelling words in sentence or paragraph form	1	2	3	4	(5)	(42)
3.	. . . refrain from having children learn many phonic rules	(1)	2	3	4	5	(43)
4.	. . . have each child correct his own spelling test	(1)	2	3	4	5	(44)
5.	. . . teach spelling words in syllabified form as opposed to the method of undivided word presentation . . .	1	2	3	4	(5)	(45)
6.	. . . refrain from teaching the meanings of most weekly spelling words	(1)	2	3	4	5	(46)
7.	. . . stress extrinsic incentives in learning to spell. . .	1	2	3	4	(5)	(47)
8.	. . . have the majority of pupils study the spelling words before taking their first weekly spelling test	1	2	3	4	(5)	(48)
9.	. . . have pupils study their spelling words in a list or column form	(1)	2	3	4	5	(49)
10.	. . . schedule my spelling periods according to the child's need.	1	2	3	4	(5)	(50)
11.	. . . administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week.	(1)	2	3	4	5	(51)
12.	. . . refrain from using spelling words derived from other curricular areas	(1)	2	3	4	5	(52)
13.	. . . have children correct misspelled words by writing them several times each	1	2	3	4	(5)	(53)
14.	. . . have children write spelling words in the air as a means of studying a word	1	2	3	4	(5)	(54)
15.	. . . teach the spelling words by the whole method as opposed to the method of learning words by syllables	(1)	2	3	4	5	(55)
16.	. . . have each child develop his own method by which he learns to spell	1	2	3	4	(5)	(56)
17.	. . . use spelling games to supplement direct instruction in learning to spell	(1)	2	3	4	5	(57)
18.	. . . have children learn many phonic rules in order to become better spellers.	1	2	3	4	(5)	(58)
19.	. . . teach the words of greatest-frequency in child and adult writing	(1)	2	3	4	5	(59)
20.	. . . call the children's attention to "hard spots" in spelling words	1	2	3	4	(5)	(60)

APPENDIX F

Pre-Test and Post-Test Instruments

Baldwin Instrument

Baldwin, Ronald F., "The Effect of Teacher In-Service Training and Knowledge of Research on Spelling Instruction and Achievement of Elementary School Children"

Unpublished Ph.D. dissertation, University of Iowa, 1975

Dear Educator:

Please answer the following survey completely. No identification of individual responses will be made.

Please mark all responses on the answer sheet provided. You may keep this copy for your own use and/or reference.

Thank you for your cooperation!

General Directions: On the answer sheet, in the grid marked "LAST NAME" enter the name of your school. Next enter today's date in the "DATE" grid. In the grid labeled "SECTION NUMBER", enter the grade level at which you teach. In the "TEST NO." column, enter 1 if you are completing the survey in January; 2 if you are completing the survey in March. Finally, enter your social security number in the section labeled "IDENTIFICATION NUMBER". Now proceed to complete the survey.

PART I - GENERAL INFORMATION

Directions: Indicate on the answer sheet the response which best describes you or your situation. Please answer each item.

1. Number of years as a spelling teacher
   1) 0-4 2) 5-9 3) 10-14 4) 15-19 5) 20 or more

2. Total number of years as a teacher
   1) 0-4 2) 5-9 3) 10-14 4) 15-19 5) 20 or more

3. Age
   1) 20-29 2) 30-39 3) 40-49 4) 50-59 5) 60-69

4. Grade level you are presently teaching
   1) Grade 4
   2) Grade 5
   3) Grade 6
   4) Ungraded upper elementary
   5) Other

5. Present teaching situation is:
   1) Self-contained
   2) Departmentalized
   3) Open-spaced
   4) Team teaching

6. Other grade level(s) at which you have taught
   1) Present level only
   2) Lower elementary (K-3)
   3) Upper elementary (4-6)
   4) Junior high (7-9)
   5) Senior high (10-12)

7. Number of years since you last registered for a language arts course
   1) 0-2 years ago
   2) 3-5 years ago
   3) 6-8 years ago
   4) 9-11 years ago
   5) 12 or more years ago

8. How many times per week do you schedule spelling?
   1) once 2) twice 3) three times 4) four times 5) daily

9. How many minutes per week are devoted to spelling instruction?
   1) 30-44 2) 45-59 3) 60-75 4) 76-100 5) 101 or more

PART II

Directions: This survey is designed to elicit your attitudes on a number of spelling issues. Indicate how you feel about each of the items in this survey. It is important that you answer each item.

Mark on the answer sheet the number of the response which reflects your attitude according to the following scale: 1-Strongly Agree; 2-Agree; 3-Undecided; 4-Disagree; 5-Strongly Disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
10. The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation.	1	2	3	4	5
11. A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling.	1	2	3	4	5
12. Writing words several times each helps insure spelling retention	1	2	3	4	5
13. Using phonic rules, for most words, is a worthwhile instructional procedure	1	2	3	4	5
14. It is helpful to have children look at "hard spots" in a word to improve spelling ability . .	1	2	3	4	5
15. Initial presentation of spelling words in list form, is a more successful method than initial presentation of spelling words in a sentence or paragraph form.	1	2	3	4	5

		SA	A	U	D	SD
16.	For the majority of children, studying spelling words before a pre-test is a highly valuable procedure	1	2	3	4	5
17.	In general, the more time spent on spelling activities, the greater will be the learning that takes place	1	2	3	4	5
18.	Whatever the method of study employed, a systematic approach to studying spelling words is preferable to the lack of a definite method of study	1	2	3	4	5
19.	An individualized approach to spelling should employ a basic core of words to be mastered . .	1	2	3	4	5
20.	Vocabulary lists such as those developed 30-50 years ago may have been quite suitable for their day, but few of the words on those lists are in common use today.	1	2	3	4	5
21.	There is a high correlation between reading and spelling; that is, a good reader should be expected to be a good speller	1	2	3	4	5
22.	The spelling words of highest-frequency in child and adult writing should be studied by elementary school children	1	2	3	4	5
23.	Time allotment for spelling should vary according to the child's need.	1	2	3	4	5
24.	The major contribution of spelling games is the stimulation of pupil interest.	1	2	3	4	5
25.	The child's correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell.	1	2	3	4	5
26.	Children should devise their own individual method by which they study each word	1	2	3	4	5
27.	Writing words in the air is a valuable means of helping the child practice the spelling of a word	1	2	3	4	5

		SA	A	U	D	SD
28.	In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words.	1	2	3	4	5
29.	Spelling lists derived from the various curricular areas are of little value in increasing spelling ability.	1	2	3	4	5
30.	Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation .	1	2	3	4	5
31.	Learning words by the whole word method is a better technique than learning words by syllables.	1	2	3	4	5
32.	Due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable	1	2	3	4	5
33.	Time alloted for the study of spelling should be approximately 60 to 75 minutes per week . . .	1	2	3	4	5
34.	The test-study method is superior to the study-test method when working with most spellers	1	2	3	4	5
35.	The spelling teacher is well advised to select a spelling text or program and follow it closely.	1	2	3	4	5
36.	To be sure its students are studying words important to them, school districts should develop a basic spelling list on a localized or area basis	1	2	3	4	5
37.	To be used to the best advantage to the children, a spelling workbook should be followed almost exactly as it is set up; nearly every exercise should be covered.	1	2	3	4	5
38.	Children should be allowed as much time as they require to write a word during spelling list dictation.	1	2	3	4	5
39.	Provision should be made within a spelling program for the systematic review of spelling words.	1	2	3	4	5

PART III

Directions: Indicate how you feel about each of the items below. It is important that you answer each item.

Mark on the answer sheet the number of the response which reflects your teaching practices according to the following scale:

1 - Almost Always (A spelling practice repeated with a very high degree of regularity)
2 - Frequently (A spelling practice repeated with some degree of regularity)
3 - Sometimes (A spelling practice used on occasion)
4 - Infrequently (A spelling practice seldom used)
5 - Almost Never (A spelling practice very seldom used)

	Almost Always	Frequently	Sometimes	Infrequently	Almost Never
AS AN ELEMENTARY TEACHER I:					
40. ... schedule my spelling periods so that the children receive from 60 to 75 minutes of instruction per week	1	2	3	4	5
41. ... have pupils study their spelling words in sentence or paragraph form	1	2	3	4	5
42. ... refrain from having children learn many phonic rules	1	2	3	4	5
43. ... have each child correct his own spelling test	1	2	3	4	5
44. ... teach spelling words in syllabified form as opposed to the whole word method.	1	2	3	4	5
45. ... refrain from teaching the meanings of most weekly spelling words	1	2	3	4	5
46. ... stress extrinsic incentives in learning to spell	1	2	3	4	5

		AA	F	S	I	AN
47.	... have the majority of pupils study the spelling words before taking their first weekly spelling test	1	2	3	4	5
48.	... have pupils study their spelling words in a list or column form.	1	2	3	4	5
49.	... schedule my spelling periods according to the child's need	1	2	3	4	5
50.	... expect most children to complete all the exercises in the spelling book	1	2	3	4	5
51.	... give each child as much time as he requires to write each word in the spelling test.	1	2	3	4	5
52.	... refrain from stressing any one method of studying new spelling words.	1	2	3	4	5
53.	... attempt to keep an updated, relevant list of words from which to build spelling lists for the children	1	2	3	4	5
54.	... allow my students to build their own spelling lists, but expect them to know a certain core of words.	1	2	3	4	5
55.	... administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week	1	2	3	4	5
56.	... refrain from using spelling words derived from other curricular areas.	1	2	3	4	5
57.	... have children correct misspelled words by writing them several times each.	1	2	3	4	5
58.	... have children write spelling words in the air as a means of studying a word.	1	2	3	4	5
59.	... teach the spelling words by the whole word method as opposed to the method of learning words by syllables	1	2	3	4	5
60.	... have each child develop his own method by which he learns to spell words	1	2	3	4	5

		AA	F	S	I	AN
61.	... use spelling games to supplement direct instruction in learning to spell	1	2	3	4	5
62.	... have children learn many phonic rules in order to become better spellers.	1	2	3	4	5
63.	... teach the words of greatest-frequency in child and adult writing.	1	2	3	4	5
64.	... call the children's attention to "hard spots" in spelling words	1	2	3	4	5
65.	... make provision for review words, even in an individualized approach to spelling	1	2	3	4	5
66.	... expect my best readers to be my best spellers	1	2	3	4	5
67.	... allow my students all the time they need for completing the spelling exercises.	1	2	3	4	5
68.	... seek to make the spelling words as locally appropriate as possible.	1	2	3	4	5
69.	... use a variety of source materials in the teaching of spelling	1	2	3	4	5

Dear Educator:

Please answer the following survey completely. No identification of individual responses will be made.

Please mark all responses on the answer sheet provided. You may keep this copy for your own use and/or reference.

Thank you for your cooperation!

General Directions: On the answer sheet, in the grid marked "LAST NAME" enter the name of your school. Next enter today's date in the "DATE" grid. In the grid labeled "SECTION NUMBER", enter the grade level at which you teach. In the "TEST NO." column, enter 1 if you are completing the survey in January; 2 if you are completing the survey in March. Finally, enter your social security number in the section labeled "IDENTIFICATION NUMBER". Now proceed to complete the survey.

PART I - GENERAL INFORMATION

Directions: Indicate on the answer sheet the response which best describes you or your situation. Please answer each item.

1. Number of years as a spelling teacher
   1) 0-4 2) 5-9 3) 10-14 4) 15-19 5) 20 or more

2. Total number of years as a teacher
   1) 0-4 2) 5-9 3) 10-14 4) 15-19 5) 20 or more

3. Age
   1) 20-29 2) 30-39 3) 40-49 4) 50-59 5) 60-69

4. Grade level you are presently teaching
   1) Grade 4
   2) Grade 5
   3) Grade 6
   4) Ungraded upper elementary
   5) Other

5. Present teaching situation is:
   1) Self-contained
   2) Departmentalized
   3) Open-spaced
   4) Team teaching

6. Other grade level(s) at which you have taught
   1) Present level only
   2) Lower elementary (K-3)
   3) Upper elementary (4-6)
   4) Junior high (7-9)
   5) Senior high (10-12)

7. Number of years since you last registered for a language arts course
   1) 0-2 years ago
   2) 3-5 years ago
   3) 6-8 years ago
   4) 9-11 years ago
   5) 12 or more years ago

8. How many times per week do you schedule spelling?
   1) once 2) twice 3) thre times 4) four times 5) daily

9. How many minutes per week are devoted to spelling instruction?
   1) 30-44 2) 45-59 3) 60-75 4) 76-100 5) 101 or more

PART II

Directions: This survey is designed to elicit your attitudes on a number of spelling issues. Indicate how you feel about each of the items in this survey. It is important that you answer each item.

Mark on the answer sheet the number of the response which reflects your attitude according to the following scale: 1-Strongly Agree; 2-Agree; 3-Undecided; 4-Disagree; 5-Strongly Disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
10. The presentation of words in syllabified form has proven to have an advantage over the method of whole word presentation.	1	2	3	4 (RS)	5
11. A child's interest in learning to spell is secondary to rewards he might receive for achievement in spelling.	1	2	3	4 (RS)	5
12. Writing words several times each helps insure spelling retention	1	2	3	4 (RS)	5
13. Using phonic rules, for most words, is a worthwhile instructional procedure	1	2	3	4 (RS)	5
14. It is helpful to have children look at "hard spots" in a word to improve spelling ability	1	2	3	4 (RS)	5
15. Initial presentation of spelling words in list form, is a more successful method than initial presentation of spelling words in a sentence or paragraph form.	1 (RS)	2	3	4	5

		SA	A	U	D	SD
16.	For the majority of children, studying spelling words before a pre-test is a highly valuable procedure	1	2	3	4 (RS)	5
17.	In general, the more time spent on spelling activities, the greater will be the learning that takes place	1	2	3	4 (RS)	5
18.	Whatever the method of study employed, a systematic approach to studying spelling words is preferable to the lack of a definite method of study	1	2 (RS)	3	4	5
19.	An individualized approach to spelling should employ a basic core of words to be mastered	1	2 (RS)	3	4	5
20.	Vocabulary lists such as those developed 30-50 years ago may have been quite suitable for their day, but few of the words on those lists are in common use today	1	2	3	4 (RS)	5
21.	There is a high correlation between reading and spelling; that is, a good reader should be expected to be a good speller	1	2 (RS)	3	4	5
22.	The spelling words of highest-frequency in child and adult writing should be studied by elementary school children	1	2 (RS)	3	4	5
23.	Time allotment for spelling should vary according to the child's need	1	2	3	4 (RS)	5
24.	The major contribution of spelling games is the stimulation of pupil interest	1	2 (RS)	3	4	5
25.	The child's correcting his own spelling test, under the direction of the teacher, is the single most important factor in learning to spell	1	2 (RS)	3	4	5
26.	Children should devise their own individual method by which they study each word	1	2	3	4 (RS)	5
27.	Writing words in the air is a valuable means of helping the child practice the spelling of a word	1	2	3	4 (RS)	5

		SA	A	U	D	SD
28.	In order to learn to spell, it is not necessary for children to learn the meaning of the majority of their spelling words.	(RS) 1	2	3	4	5
29.	Spelling lists derived from the various curricular areas are of little value in increasing spelling ability.	(RS) 1	2	3	4	5
30.	Presenting spelling words in sentence or paragraph form, for the first time, is more successful than the spelling list presentation .	1	2	3	4	(RS) 5
31.	Learning words by the whole word method is a better technique than learning words by syllables?	(RS) 1	2	3	4	5
32.	Due to the nature of the English language, most attempts to teach spelling by phonic rules are questionable	(RS) 1	2	3	4	5
33.	Time alloted for the study of spelling should be approximately 60 to 75 minutes per week . . .	(RS) 1	2	3	4	5
34.	The test-study method is superior to the study-test method when working with most spellers	(RS) 1	2	3	4	5
35.	The spelling teacher is well advised to select a spelling text or program and follow it closely.	1	2	3	4	(RS) 5
36.	To be sure its students are studying words important to them, school districts should develop a basic spelling list on a localized or area basis	1	2	3	4	(RS) 5
37.	To be used to the best advantage to the children, a spelling workbook should be followed almost exactly as it is set up; nearly every exercise should be covered.	1	2	3	4	(RS) 5
38.	Children should be allowed as much time as they require to write a word during spelling list dictation.	1	2	3	4	(RS) 5
39.	Provision should be made within a spelling program for the systematic review of spelling words.	(RS) 1	2	3	4	5

PART III

Directions: Indicate how you feel about each of the items below. It is important that you answer each item.

Mark on the answer sheet the number of the response which reflects your teaching practices according to the following scale:

1 - Almost Always (A spelling practice repeated with a very high degree of regularity)
2 - Frequently (A spelling practice repeated with some degree of regularity)
3 - Sometimes (A spelling practice used on occasion)
4 - Infrequently (A spelling practice seldom used)
5 - Almost Never (A spelling practice very seldom used)

	Almost Always	Frequently	Sometimes	Infrequently	Almost Never
AS AN ELEMENTARY TEACHER I:					
40. ... schedule my spelling periods so that the children receive from 60 to 75 minutes of instruction per week	1	2 (RS)	3	4	5
41. ... have pupils study their spelling words in sentence or paragraph form	1	2	3	4 (RS)	5
42. ... refrain from having children learn many phonic rules	1	2 (RS)	3	4	5
43. ... have each child correct his own spelling test	1	2 (RS)	3	4	5
44. ... teach spelling words in syllabified form as opposed to the whole word method.	1	2	3	4 (RS)	5
45. ... refrain from teaching the meanings of most weekly spelling words	1	2 (RS)	3	4	5
46. ... stress extrinsic incentives in learning to spell	1	2	3	4 (RS)	5

		AA	F	S	I	AN
47.	... have the majority of pupils study the spelling words before taking their first weekly spelling test	1	2	3	4	5 (RS)
48.	... have pupils study their spelling words in a list or column form.	1	2	3	4	5 (RS)
49.	... schedule my spelling periods according to the child's need	1	2	3	4	5 (RS)
50.	... expect most children to complete all the exercises in the spelling book	1	2	3	4	5 (RS)
51.	... give each child as much time as he requires to write each word in the spelling test.	1	2	3	4	5 (RS)
52.	... refrain from stressing any one method of studying new spelling words.	1	2	3	4	5 (RS)
53.	... attempt to keep an updated, relevant list of words from which to build spelling lists for the children	1	2	3	4	5 (RS)
54.	... allow my students to build their own spelling lists, but expect them to know a certain core of words.	1	2	3	4	5 (RS)
55.	... administer a spelling pre-test before the majority of pupils have had an opportunity to study the words for the week	1	2	3	4	5 (RS)
56.	... refrain from using spelling words derived from other curricular areas.	1	2	3	4	5 (RS)
57.	... have children correct misspelled words by writing them several times each.	1	2	3	4	5 (RS)
58.	... have children write spelling words in the air as a means of studying a word.	1	2	3	4	5 (RS)
59.	... teach the spelling words by the whole word method as opposed to the method of learning words by syllables	1	2	3	4	5 (RS)
60.	... have each child develop his own method by which he learns to spell words	1	2	3	4	5 (RS)

		AA	F	S	I	AN
61.	... use spelling games to supplement direct instruction in learning to spell	(RS) 1	2	3	4	5
62.	... have children learn many phonic rules in order to become better spellers	1	2	3	(RS) 4	5
63.	... teach the words of greatest-frequency in child and adult writing	(RS) 1	2	3	4	5
64.	... call the children's attention to "hard spots" in spelling words	1	2	3	(RS) 4	5
65.	... make provision for review words, even in an individualized approach to spelling	(RS) 1	2	3	4	5
66.	... expect my best readers to be my best spellers	(RS) 1	2	3	4	5
67.	... allow my students all the time they need for completing the spelling exercises	1	2	3	(RS) 4	5
68.	... seek to make the spelling words as locally appropriate as possible	1	2	3	(RS) 4	5
69.	... use a variety of source materials in the teaching of spelling	(RS) 1	2	3	4	5